CHEMIST AND DRUGGIST

RETAILER — WHOLESALER — MANUFACTURER
AUGUST 23, 1952





DURACILLIN A.S.

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PROCAINE PENICILLIN-G AQUEOUS SUSPENSION 300,000 UNITS PER CC.

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Is a stable aquesuspension needing only gentle

agitation before injection. Dry syringe and needle not essential

DAILY DOSES ADEQUATE

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'Duracillin A.S.' is supplied in 10 cc. rubbercapped ampoules No. 554 (300,000 units per cc.)

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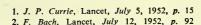
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PH. 45a

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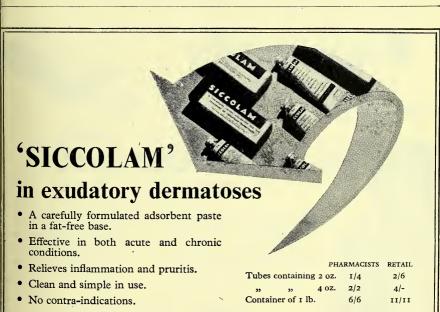
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THE ALBION SOAP CO., LTD., 30-2 THAMES STREET, HAMPTON, MIDDX Makers of the world famous Albion Milk and Sulphur Toilet Soat



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BRITISH DRUG HOUSES

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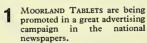
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Offers
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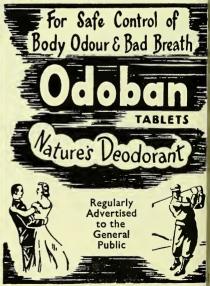
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-and what's in this for You?

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new business, repeat business,



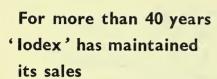
KLEENEX* sells on sight because it's soft — strong — and is the only tissue that "POPS UP ONE-AT-A-TIME". * Reg. Trade Mark

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150	ECONOMY SIZE TISSUES (75 pulls) $8\frac{3}{4}$ " x $6\frac{3}{4}$ "	1/-
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Made in England by Cellucotton Products Ltd., 33 Aylmer Parade, N.2.

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'lodex'

'lodex' cum Methyl Salicyl.

non-staining iodine ointment

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The South African Ulcer Treatment

A unique departure in the treatment of DUODENAL and GASTRIC ULCER

A revolutionary and unorthodox method which requires

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Two-hourly Feeds or Bed Resting

Relief from pain and other distressing symptoms is assured within a few days; a full diet is possible from the fourth day onwards, and the complete treatment, occupying five weeks, can be successfully taken at home without interfering in any way with normal routine or occupation.

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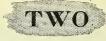
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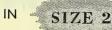


SIZES!

You can now

SILPAK

the cotton-wool towel with soft plastic shield



AS WELL AS S17E 1



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> The retail price of Size 2 is 2/3 per packet of twelve. Trade price per dozen packets is 20/3, including Purchase Tax on shield.

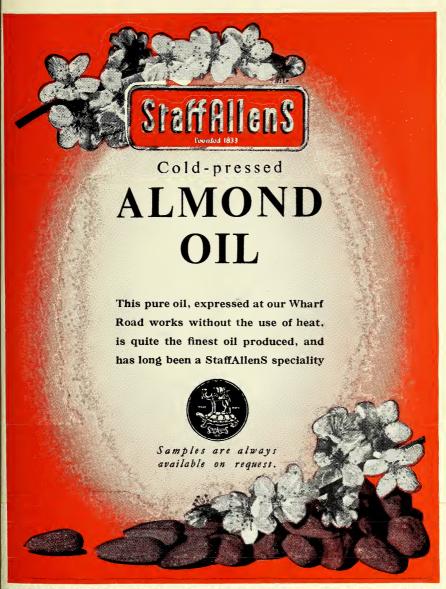
The larger size brings the advantages of Silpak to a greater number of women users, who will also appreciate the comfort and security of a cotton-wool towel at a relatively low price.

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TRADE TERMS

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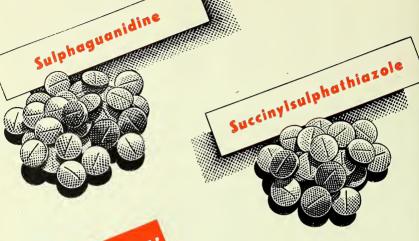
List price per dozen 12/purchase tax 4/-

YOUR BASIC PROFIT 4/-

Kolynos with Chlorophyll tooth-paste qualifies for the usual DISPLAY BONUS on I.C.C. mixed parcels, £5 parcel 10%; £10 parcel $12\frac{1}{2}\%$, your profit on the best terms 34.37%.

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maximal efficacy with smaller dosage

'Thalazole' provides an efficient method of controlling the infection in bacillary dysentery and other gastro-intestinal conditions of bacterial origin. It has the advantages over sulphaguanidine and succinylsulphathiazole of higher bacteriostatic activity in the bowel and is thus usually effective in smaller dosage.

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Containers of 100			
Containers of 500			
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SUSPENSION			
Bottles of 4 fl. oz	. 1	1 6	4
Bottles of 40 fl. oz.			
(each fluid drachm [3.6 c.c.] contains phthalylsulphathiazole).	0.75	Gm	١,
phthalylsulphathiazole).			

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-150

-125

-100

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Horsepower required	\dots 1 $h.p.$
Speed of motor	1420 r.p.m.
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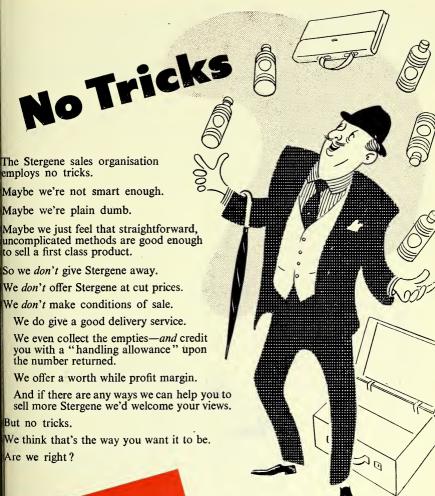
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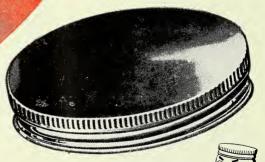
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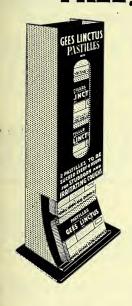
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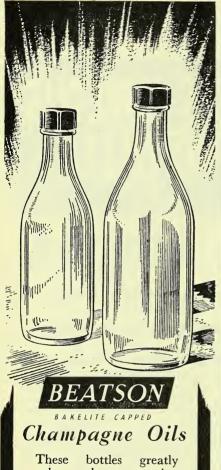
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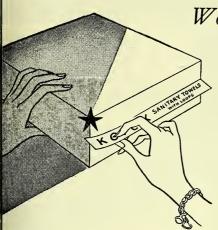
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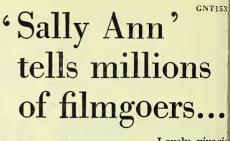
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AUGUST 23, 1952

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NEWS OF THE WEEK

Drug Tariff Delayed.—The Ministry of alth states that because of printing diffilies copies of the July 1952 Drug Tariff: not expected to be available until late August. Doctors and chemist-contractors I receive a notice as soon as possible out certain entries in the Tariff.

Vitamin B₁₂ from Seaweed. — At the t world symposium on seaweed held in inburgh recently, it was reported that amin B₁₂ was probably present in a numr of common brown and red seaweeds. uch research will be required before mmercial extraction can be contemited.

Training in Electronics.—The Ministry Supply is offering five-year apprentice-ps in electronics to boys between six-n and seventeen years of age. Particumay be obtained from the Departatal Training Officer, 66 Gower Street, adon, W.C.I. The closing date for plications is August 30.

Diabetic Research Fund Renewed. — Deed of Covenant for £1,000 per anm in favour of the diabetic research

fund of King's College Hospital, London, has been renewed by Boots, Ltd., Notting-ham, for a further seven years. The subscription has already enabled a new technique to be developed for the estimation of insulin in plasma.

British Radioactive Products for U.S.?—Representatives of the British Ministry of Supply and the Nuclear Instrument and Chemical Corporation of Chicago concluded an agreement in Chicago on August 18 by which British-made radioactive products from the Ministry's Radiochemical Centre, Amersham, Bucks, will be able to compete in the American market.

French Imports from U.K.—The goods to be imported under quotas into France from the United Kingdom in the third quarter of 1952 include:—Disinfectant preparations, insecticides, anti-pest preparations, fungicides, herbicides, anti-parasitics and the like, not mentioned or included elsewhere; laboratory glass; x-ray equipment; machinery and equipment for soapmaking, perfumes, and pharmaceuticals, and spare parts.

Purchase Tax Amendments. — Notice No. 78D, issued by the Commissioners of Customs and Excise, has been revised. Copies are being sent to traders registered for purchase tax purposes who are known to be concerned and to trade associations. The revised Notice incorporates changes made during the passage through Parliament of the Finance Bill, 1952, and supersedes Notice No. 78D (March 1952).

Insurance of Married Women.—By an Order made by the Minister of National Insurance on July 31, the National Insurance (Classification) Regulations, 1948, are amended so that a married woman employed by, or as a partner of, or in any similar association with, her husband, is not to be treated as a non-employed person if the employment ordinarily occupies not less than twenty-four hours per week, and is in a trade or business. If she is so employed by her husband under a contract of service, she is treated as a self-employed person. The Order, which came into force on August 7, is called the National Insurance (Classification) Amendment (No. 3) Regulations, 1952 (S.I. No. 1454, 1952).

Socialist Medical Association.—At its recent annual conference in London the Socialist Medical Association passed resolutions calling for Legislation to invest in a single authority the responsibilities of Executive Council, Regional Hospital Board and local authority; appointment to statutory committees by democratic election; financial support for the establishment of temporary health centres; National Health Service benefits to be made available without payment when needed; substitution by "dispensers" of pharmacopæial equivalents for proprietaries (unless prescription be marked "not alterable" by prescriber); and the establishment of a Press council that would abolish the advertising of proprietaries in the non-medical Press.

Isotopes Explained. — A useful summary of isotopes and their uses is contained in the first illustrated history of the work and problems of the Atomic Energy Research Establishment, Harwell, Berks, recently published by H.M. Stationery Office. The publication deals in turn with the four programmes of work undertaken at Harwell:—Production of uranium, etc.; isotopes; reactors; and accelerators—in a style judged suitable for the "general" reader. The chapter dealing with isotopes discusses what an iso-

tope is, how radioisotopes are made in piles, how the irradiated material is processed chemically and dispatched, and what are the medical, biological and in dustrial uses of isotopes. Copies of the book, entitled "Harwell," may be obtained from the publishers, York House, Kings way, London, W.C.2, price 6s.

International Vaccination Certificates
—In view of the provisions of the World Health Organisation International Sanitar Regulations (G. & D., 1951. II. 748 which come into force on October 1, the Minister of Health has prescribed that a approved stamp required for international vaccination certificates issued in Englan and Wales should be one bearing the name of a body approved by him to use it. The following bodies are so authorised:—

(a) The Common Council for the City London, every Metropolitan Borough Council, ar every Town Council, Urban District Council at Rural District Council in England and Wales.

(b) The Medicai Services of the Royal Nav Army and Royal Air Force.

(c) The National Maritime Board (Unit Kingdom). (d) The Medical Department of the Briti

Overseas Airways Corporation.

(e) The Medical Service of the British Europe Airways Corporation.

Prescribers' Notes.—The third edition of Prescribers' Notes" is now being issue by Executive Councils to all doctors under the National Health Service. It is en phasised in the Notes that the lists official equivalents of proprietary prepar tions in the National Formulary 1952 a intended to help doctors to use offici names on their prescriptions and so (reduce delay to patients when a particul brand of standard drug must be special ordered, since the pharmacist must n substitute any other make of the san drug and (b), reduce compensation f "token bulk" when the remainder of original package cannot be readily d posed of. Doctors are advised that d continued formulas (e.g., from the Nation Insurance Formulary) should be written full. The attention of doctors is direct to the paragraph in the N.F. 1952, (p. 2 dealing with the choice of chemotherape tic agent; and to those on p. 39 of t N.F. 1952 dealing with prescriptions I Schedule 4 poisons or for Dangerous Dru And finally, under the headline "Slin ming," it is stated that a saving £242,000 would have been achieved 1951 if dexamphetamine sulphate table had been prescribed instead of Dexedrir

LOCAL NEWS

Students' Study Tour. - Thirty-two nembers of the International Pharmaceu-ical Students' Federation from fourteen ountries came to London for the Federa-ion's ten-days' study tour from August 17 27. Their vice-president (Mr. John L. rapkin, South Africa) presided at the pening ceremony when Mr. C. W. Maplehorpe welcomed the Federation on behalf f the Pharmaceutical Society's Council. he study tour included visits to Allen & lanburys, Ltd., Ware; Evans Medical upplies, Ltd., Ruislip; Glaxo Labora-ories, Ltd., Greenford; the Wellcome esearch Institution; and visits to pharmaes in Southend, where the students were eceived by the mayor. They were also ceived by the mayor of Wanstead and Voodford and made trips to Oxford, ambridge, Kew and Stratford-on-Avon. he fourteen countries represented were ustria, Australia, Ceylon, Denmark, Eire, rance, India, Italy, New Zealand, South frica, Switzerland, Sweden, Turkey and Vestern Command lestern Germany.

Pharmacy in Australasia.—Mr. C. W. laplethorpe (a member of the Pharmautical Society's Council) addressed the
th annual summer meeting of the East
letropolitan Branch of the Society at
uckhurst Hill, Essex, on July 24, on
Pharmacy in Australia and New Zeand." In New Zealand the administraon of the profession from the legal
andpoint was carried out by a Pharacy Board. There also existed a Pharmautical Service Guild somewhat compar-

able to the National Pharmaceutical Union. There was a National Health Service scheme in New Zealand with a limited list of prescribable products including all British Pharmacopæia and British Pharmaceutical Codex preparations. Doctors got a fee for each visit. New Zealand pharmacists were most anxious to know about British methods and ideas on education; pharmacists there could qualify by correspondence courses. There was a small school of pharmacy in Wellington and a school might be set up in the University of Otaga as responsible pharmacists in New Zealand wanted their colleagues to be other than mere compounders and washers up. Australia was completely different from New Zealand. There was a large department of pharmacy in the University of Sydney. A degree student had three years in the University and one year in hospital or wholesale. A retail apprentice worked in the pharmacy in the morning and spent the afternoon at the University.

SPORT

Golf.—London Chemists' Golfing Society, at Royal Mid-Surrey Golf Club, on August 13. Medal competition for president's prize and president's putter (presented by Mr. L. J. Morson): A. J. Campbell (9), 68 net (five strokes under s.s.s.). Bogey competition for Leichner cup: Mr. H. R. Camish (13), 1 down. Other leading scores:—Medal: Messrs. H. R. Dawson (24) 69, H. R. Camish (13) 71, E. S. Hole (13) 72, R. Poole (9) 73, H. R. Nightingale (19) 74, W. A. C. Attwood (18) 76, and C. H. Maile (7) 76. Bogey: Messrs. E. S. Hole—1, R. Poole—2, H. R. Dawson—2, W. A. C. Attwood—3, C. H. Maile—3, G. T. Morson—4, and H. R. Nightingale—4.



SALES CONFERENCE AT NORTH BERWICK.—Members of the staff of T. & H. Smith, Ltd., Edinburgh, d subsidiary companies at the company's annual sales Conference at North Berwick, recently. In nt row, left to right, are Messrs. R. S. Allsop (senior representative), W. Cooper (manager, Glasgow anch), A. P. Lowes (a director), H. G. Sharp (a director), J. H. Ramsay (managing director), V. F. el-Paton (chairman), J. A. Hiddleston (a director and the secretary), E. P. Hudson (a director), P. lelds (a director, W. & R. Hatrick, Ltd.), G. H. Spittal (Edinburgh sales manager), S. G. Home cottish manager), and A. Forsyth (a director).

FLOOD DAMAGE TO LYNMOUTH PHARMACY

THE unprecedented floods that destroyed much of the town of Lynmouth, Devon, on August 15, wrecked the town's only pharmacy in Watersmeet Road. Its proprietor, Mr. C. L. Compston, M.P.S., was away from the premises at the time, but his assistant and Mrs. Compston became marooned in an upper story of the build-ing until they were rescued. The phar-macy building still stands, but has been undermined by the torrent and may have to be pulled down. The town itself was evacuated on August 16. The secretary of the Devon Pharmaceutical Committee (Mr. H. Jarvis Graves) who offered the help of members of the Committee in maintaining pharmaceutical services in the area, and later visited Lynmouth with Mr. Compston to see the extent of the damage at the pharmacy, states that it was possible to step from a first-floor window direct on to the heaped debris. The Central Checking Bureau has undertaken to deal at once as a matter of special urgency with the pricing of all Mr. Compston's National Health Service prescriptions at present in the hands of the pricing bureau. Two manufacturers have wired Mr. Compston promising to replace stocks of their goods. Other manufacturers who may be thinking on similar lines should hold back supplies until the pharmacy is reinstated Among subscriptions to the North Devor and West Somerset Relief Appeal is ar amount of £210 from The Wellcome Foundation, Ltd.

The neighbouring town of Lynton which stands on a hill above Lynmouth escaped flood damage. The water supply to the two pharmacies was maintained though the electricity service failed. Restoration was expected within a week, No difficulty was experienced in maintaining

pharmaceutical services.

Damage at Dulverton

In Dulverton, Somerset, which was als affected by floods, the pharmacy of Mr P. C. Proffitt, the only one in the village escaped damage. In the lower part of th village Mr. Proffitt lost a store building containing agricultural preparations.

EXAMINATION RESULTS

THE following have been successful in the B.Pharm., examination, London 1952:—

INTERNAL

First Class Honours-

Bowman, William C. Mellers, Hazel M. Morris, Sonia L. Ritchie, Alan R.

Second Class Honours-

Betts, Thomas J. Child, Kenneth J. Cymbalist, Michael A. D'Arcy Patrick F. Hammond, Jean G. Highley, Betty Ives, John G. Pexton, Ruth E. Walsh, Margaret B. Wilkinson, Peter

Pass--

Belthle, Frank W. Butler, Edwin H. Cox, Margaret J. Edwards. David E. Fell, Christopher J. Friend, Margaret Girgis, Pamela M.

Howarth, Brian Jolliffe, Geoffrey O. Kapur, Victor J. Ratcliffe, Colin E. Tabakof, Arnold

Gyang, Emmanuel A.

EXTERNAL

Baker, Rodger
Bamborough, Ronald
Briggs, Leonard
Cherryman, Ethel W.
Glendinning, Wilkinson
Hanson, John K.
Hart, Henry
Hartas, Frederick
Hewell, Robert J.
Hopkins, John H.

Jones, Janet O. Merrick, Robert W. Mollison, Eric Muter, Sheila Phillips, Maurice F. Pope, William C. Riley, Geoffrey S. Tomsett, Osborne W. Warlow, John R. Wilkinson, Anthony J. The following satisfied the examiners i the Pharmaceutical Chemist Qualifyin examination held by the Pharmaceutica Society in Scotland in July:—

Society in Scotland Ainley, Kenneth G. Alsop, Edith M. Anderson, Elspeth J. Bailey, Jean Bain, Elizabeth J. Barnett, Geoffrey Baxter, Alexander H. Bell, Eileen M. Bellis, James D. Bligh, Michael I. Booth, William W. Burcher, Margaret Burr, Rosemary Cooper, John A. Coward, Victor N. Cozens, Dorothy M. Curtis, Drury P. Davies, Oscar D. Dawson, Geoffrey V. Duthie, James B. Easter, Walter C. H. Fines, George B. Fraser, Elizabeth G. Gibson, John F. Gillespie, John Goldsworth, John G. Gunn, Donald A. B. Henderson, Philip Hindmarch, David Joiner, Janet Laycock, Harold H.

July:— Leitch, James R. Lister, Margaret Luty, Joyce McKnight, Hugh Mace, Derek J. Mason, John C. Mitchell, Sheila J. Onley, Robert M. Pike, Peter Rostern, Donald F. Saxby, Harry E. Selby, Colin Sim, David S. Simmons, Russell N. Smallwood, Walter Smart, Archibald S. Smith, Peter H. Stanier, David E. Stray, Patricia A. Stronach, William I Tarras, Phyllis J. Thompson, Mary B. Ulicki, Zdzislaw J. Whittaker, Kenneth Wildblood, Marjorie Wood, William R. Wright, John D. Wright, Margaret Wright, Michael E. I Young, Alan H.

TOPICAL REFLECTIONS

Broadcasting Ignorance

The Exmouth pharmacist who telephoned to the British Broadcasting Corporation regarding a deleterious applica-tion recommended in a programme is to be congratulated (p. 210). Listeners to many radio "turns" must expect to find tares among the wheat; but when a mixture of carbolic acid and vinegar, 1 and 3, is held out as a "cure" for gnat bites, it is time that someone sounded an alarm. The British Pharmaceutical Codex states that the use of phenol as an antiseptic "has greatly declined" because it is almost as toxic to the tissue cells as to bacteria. Such broadcast statements as those referred to on p. 210 should be submitted to a competent scientist before the script is passed. This incident may serve as a reminder that preparations of phenol need to be dispensed with a thought of possible accidents to customers using them. Many years ago a chemist received a prescription for an application consisting of phenol and camphor, no strength being specified. The book of reference that he consulted gave a formula with a high phenolic percentage. It afterwards appeared that an application with a low percentage, printed elsewhere, was required. Meanwhile a letter arrived stating that a frock had been stained by the fluid and claiming damages. The Chemists' Defence Association advised that a small sum should be paid to the complainant. Other instances can no doubt be given of mishaps that can hardly be avoided unless dispensers are constantly on the alert and trained to interpret as well as read prescriptions.

Health Service Costs

The report of the Committee of Public Accounts referred to on p. 214 contains a very unsatisfactory criticism of the finance of National Health Service dispensing, On the face of it, the Committee appears to insinuate that something, but no one knows what, is wrong with the cost of the work. That may, of course, not be the intention of the remarks, but it is the impression they make on me. In any case, one platitude might have been omitted; it reads: "Obtaining information on actual costs of production appears to the Committee to be the most effective method of testing the reasonableness of any prices whose fairness s not clearly established by competition." Though several years have passed since the Peat report appeared, it seems unlikely that any new estimate of the relation of chemists' overhead expenses to their turnover will do more than move the Peat figure up: such an estimate will almost certainly not move the figure down. My recollection of the controversy between Scottish panel chemists and the Department of Health for Scotland is not quite the same as that of the Committee of Public Accounts; but that affair has become a matter of history. The chief point vexing the minds of the Committee is, I gather, the principle that "prices of drugs are limited by competition." Seeing that the Committee realises the difference between proprietary preparations and other medicaments, one can only wonder that a principle almost self-evident can cause so much perturbation.

An Alchemical Exhibition

The exhibition of alchemical books at the Science Museum in London (p. 231) is worth seeing. Anyone possessing a copy of your Special Issue of June 25, 1921, may like to consult, in this connection, a study of alchemy by C. C. Bell. Mr. Bell set out to be studiously kind to alchemy, but, by the nature of the evidence, had to show that theory took precedence over reason among practitioners of the art. The philosopher's stone — a "lucus a non lucendo," for it was not a stone in the usual sense of the word-functioned, when obtained, as only the germ, so to speak, from which the transmutation of metals could be effected. It had to pass through twelve "gates" or processes, beginning with calcination, and according to a poem by Ripley dated 1471 these twelve occupied an astronomical year. Some time ago I went through the works (or a large selection of them) of Geber, translated by Richard Russell in 1678 and republished in 1928. This alchemist was the son of an Arabian druggist at Kufa in Iraq, and was born, it is estimated, in 721 or 722. Like many scholars of his age, E. J. Holmyard states in the introduction to the translation, that he possessed an encyclopædic range of knowledge. court of Harum-el-Rashid, where he had been in favour, he was expelled in 803: he died soon after. Geber combined Aristotle's theory of the constitution of metals (while making it more definite) with mystical speculation. Xrayser

NEW COMPANIES

W. E. TANNER, LTD. (P.C.).—Capital £3,000. To carry on the business of chemists and druggists, etc. Frank Miller, M.P.S., and Yetta Nathan, directors. R.O.: 36 Station Road, Chingford, London, E.4.

Lamour Surgicals, Ltd. (P.C.).—Capital £100. To carry on the business of manufacturers of and dealers in surgical, orthopædic, medical, curative and healing instruments, appliances and equipment. Eric C. Lampard, and John Morgan, directors. R.O.: 5 St. James Square, Bristol, 2.

MASEC, LTD. (P.C.).—Capital £100. To carry on the business of manufacturers of and dealers in surgical, medical, dental and veterinary instruments, etc. Eric L. Silverstone, Michael Miller, David L. Hatrick, and Douglas H. Levett, directors. R.O.: 11 Albert Square, Manchester, 2.

Samuel Robinson & Co., Ltd. (P.C.).
—Capital £2,000. To carry on the business of dealers in, agents for and factors of chemicals, produce and raw materials of all kinds, etc. Harold S. Robinson, Clara Robinson and Ronald A. Masters, directors. R.O.: 27A Martin Lane, London, E.C.4.

KAYEFF INDUSTRIAL PRODUCTS (MANUFACTURING), LTD. (P.C.).—Capital £100. To carry on the business of dealers in toilet requisites and preparations, cosmetics, etc. Charles Firminger, John Firminger, and Arthur J. F. Kenyon, directors. R.O.: 3 Wey Dane, Chesham, Bucks.

CHILCOTT LABORATORIES, LTD. (P.C.).—Capital £500. To carry on the business of manufacturers of and dealers in pharmaceutical, medicinal, chemical, industrial and other preparations, etc. Piers G. E. Warburton, Kenneth J. Golds, Frederick A. S. Gwatkin and Richard F. Caldersmith, directors, R.O.: Power Road, Chiswick, London, W.4.

Kybo, Ltd. (P.C.).—Capital £100. To carry on the business of breeders, importers and exporters of and dealers in live animals; analytical and consulting chemists, and to undertake analytical work of all kinds, etc. Henry J. Fredman and Frank W. Watts, subscribers. The first directors are to be appointed. R.O.: 44 Brook Street, London, W.I.

S. GILL & Son, LTD. (P.C.).—Capital £3,000. To acquire the business of a

manufacturing, analytical, photographic and dispensing chemist and opticiar carried on by T. W. Crompton at Salford Lancs, as S. Gill & Son. Thomas W. Crompton, M.P.S., and (Mrs.) Marjori Crompton, and Harold Seddon, M.P.S. directors. R.O.: 57 Broad St., Pendleton Salford, 6.

Company News

SOUTHALLS (BIRMINGHAM), LTD.—MI J. D. Robbins has been appointed a director.

STEPHEN SMITH & Co., LTD.—Tradin profit for the year £27,029 (a decrease o 51.1 per cent.). Dividend of 8 per cent on preference shares has been paid and dividend of 10 per cent. on ordinary share is recommended.

BARCLAY & Sons, LTD.—At the fifty sixth annual meeting a proposed 5 pe cent, dividend on both classes of share was approved. The chairman said that had been decided to close the Londo warehouse and concentrate activities at th Brighton branch. Likely profits from th London business would not justify th heavy overhead expenses involved in cortinuing it.

J. C. & J. FIELD., LTD., and D. R. Cor LINS, LTD.—It is proposed to amalgamat the companies subject to the approval shareholders of J. C. & J. Field, Ltd., an extraordinary general meeting to held on September 10. It is also propose to appoint Mr. D. R. Collins (at preser chairman of D. R. Collins, Ltd., an Goya, Ltd.) managing director of J. C. J. Field, Ltd. The sales and buying organisations of the amalgamating companie are to carry on separately. Messrs. Fiel are to acquire the entire issued capital of £100,000 of D. R. Collins, Ltd.

ANGIER CHEMICAL Co., LTD.—The con pany has been purchased by Bristol-Mye, Co., '630 Fifth Avenue, New York, N.Y U.S.A. The new board of Messrs. An gier, who will continue to operate under the same title as previously, will consi of Messrs. William M. Bristol and E. (Ladewig (directors of Bristol-Myers Consumption of Messrs.) Mr. R. Pascoe Rutter who continue as managing and Mr. J. P. Rober as works directors. Mr. J. C. Gambl (chairman and managing director of Britol-Myers Co., Ltd., Slough Tradit Estate, Slough, Bucks) has been appointed a director and the chairman.

CONTROLS FOR PROPRIETARIES?

HE control of proprietary remedies was ealt with by Sir Weldon Dalrymple-Hampneys (deputy chief medical officer, finistry of Health) in an address to the tottingham Medico-Chirurgical Society nd branch of the British Medical Assoiation earlier in 1952, and reported in the British Medical Journal," August 16, p. 87. Control of proprietary remedies, he aid, involved such questions as the nevitability and innocuousness of simple elf-medication, the freedom of the loctor to prescribe what he thinks est for his patient, the legitimate rofits of the manufacturers, who laim that their ordinary "lines" must ay for the research needed to produce heir "ethical remedies," and the proper nethod of determining what remedies are eally needed and for what conditions it is ustifiable to advertise them.

Useless " Remedies

Now, proprietary remedies can be livided into two main categories—those dvertised to the public and those, known s "ethical remedies," which are adverised only direct to the medical profession. Inormous sums of money were spent on emedies of the class advertised to the ublic, by the public and by the State through prescriptions under the National lealth Service, and also on "ethical" remedies mostly by the State. "I think there spretty general agreement that a substanial proportion of this expenditure is vasted because the remedies are useless, inpropriately used, or unnecessarily expenive," he continued. Many people thought hat there should be legal control of such emedies but there was difference of pinion among them as to the appropriate orm of control.

It has been estimated that in 1951 about 29 million prescriptions were dispensed nder the N.H.S. at an average cost of s. 11½d. per prescription, and of these bout 20 per cent. by number and 40 per ent. by cost were for proprietary preparaions. Though valuable new drugs have een developed at great cost by some prorietary firms, other firms, tempted by the acilities for prescribing afforded by the V.H.S., have merely duplicated standard reparations under proprietary names or lave formulated medicines of doubtful herapeutic value at high prices. Such dulicate and doubtful medicines appear to

constitute a major cause of the increase in the proprietary drug bill and their prescribing to be the result of skilful propaganda to the doctors and advertising to the public which, of course, results in pressure on the doctor by the patient. The advent of the National Health Ser-

vice had made the position far more serious by the impetus it had given to the unnecessary multiplication of medicines and the intolerable burden thereby placed on the country's finances. The finding of a solution was a matter of urgent importance. It was worth noting that France had recently taken drastic action to curb the production of unnecessary or valueless proprietary medicines. Following the introduction of legislation, manufacturers had been obliged to register their products and pay a fee for such registration, with the result that the 20,000 marketed proprietary medicines were reduced overnight to 8,000. Those 8,000 were then classified therapeutically, and no new preparations were considered for entry on the register unless an expert committee decided that they represented a significant advance on those already available. A number of other European countries were likely to follow that lead in the near future, and the probable effect of such a change on the British drug trade was obvious.

ECHOES OF THE PAST

ESSENCE OF WATER-DOCK

From "The London Chronicle or Universal Evening Post," February 12 to 14, 1760. "For the Scurvy, and all obstinate breakings out upon the Skin; Spots, Pimples Scurf, and Leprosy: ESSENCE of WATER-DOCK, Prepared by the Direction of Dr. HILL.

Authors of the highest Credit and Authority have affirmed, that the Great Water-Dock Root is an absolute and certain Cure for the Scurvy: And, perhaps, there never was an Instance, where it has been fairly tried, in which it has failed. The great Virtue of the Root lies in its inner Rind, of which this Essence is a perfect Solution. A Tea Spoonful is a Dose.

It is sold, with printed Directions, at Mr. Baldwin's, Bookseller in Pater-noster-row, and Mr. Jackson's, Bookseller in St. James's-street, in Bottles 3s. each, sealed and signed by the Author; also at all the creditable Booksellers in the Country who sell Valerian."

MARRIAGE

SHAW—BINGHAM. — At Sanderstead Church, Surrey, on August 16, Dr. Granville Lewin Shaw. son of Mr. Granville Shaw, Ph.C. (a member of the Pharmaceutical Society's Council and chairman of the Local Committee of the British Pharmaceutical Conference, 1952), Long Eaton, Nottingham, to Audrey Bingham, Purley, Surrey.

DEATHS

ENGEL.—Recently, Mr. Desider Engel (governing director, Staple Essential Oils and Chemical Co., Ltd., London).

Jones.—Recently, Mr. Thomas Garfield Jones, M.P.S., Aberfan Crescent, Aberfan, Merthyr Vale, Merthyr Tydfil, Glam, aged forty-nine. Mr. Jones was a past-president of the local chamber of trade. He is survived by his widow and a son.

ROBERTS.—At 2 Well Street, Ruthin, Denbighs, on August 18, Mr. Thomas John Roberts, M.P.S., aged eighty-three. Mr. Roberts had a long record of public service, was an alderman of Denbigh county council, a former chairman of the county education committee and a member of Ruthin borough council for fifty-five years, He was mayor of Ruthin three times, and was made a freeman of the borough in 1936. When elected to Ruthin council in 1895, at the age of twenty-five, he was one of the youngest councillors in the country. He was a member of Denbigh Insurance Committee for thirty-three years.

Stebbing.—At his home, Park-Knowe, Lundin Links, Lower Largo, Fife, on August 12, Mr. William McAllan Stebbing, M.P.S. He qualified in 1931.

STEDMAN,—At her home recently, Mrs. E. A. Stedman (a director of Arthur Stedman, Ltd., dispensing chemists, 15 High Street, Snodland, Kent, and widow of the late Mr. Arthur Stedman, chemist and druggist), High Street, Snodland.

WILLS

Mr. A. C. Parkinson, M.P.S., 267 Watling Street, Grendon, Warwicks, left £7,855 (£7,753 net.)

Mr. W. W. B. Bell, M.P.S., 9 St. Margarets Avenue, Leeds, left £5,063 (£4,988 net).

MR. A. M. WARE, M.P.S., 89 Hill Lane, Manchester, left £671 (£641 net).

Mr. C. Tindale, M.P.S., 3 White Point Road, Whitby, Yorks, left £22,785 (£10,805 net).

Mr. A. Faull, M.P.S., 19 Haslingden Drive, Bradford, left £5,632 (£5,534 net).

Mr. H. W. Redfearn, M.P.S., 5 Poplar Avenue, Sowerby Bridge, Yorks, left £5,069 (£4.942 net).

Mr. O. R. Windemer, Ph.C., 86 Duchy Road, Harrogate, [left £16.940 (£15,541 net).

Mr. F. W. Moulds, M.P.S., 111 Foxhall Road, Nottingham, left ££6,247 (£6,182 net).

Mr. A. L. Martin, M.P.S.N.I., Glencar, Armagh Road, Portadown, co. Armagh, left £4,597.

MR. T. G. HAYNES, M.P.S., Hillcroft, Grange Avenue, Ben Rhydding, Ilkley, Yorks, left £1,222 (£1,173 net).

Mr. R. G. TURNBULL, M.P.S., 140 Kenton Road, Kenton, Middlesex, left £6,231 (£3,664 net).

Mr, J. J. Sutherland, M.P.S., 13 Station Parade, Balham, London, S.W.12, left £3,253 (£2,157 net).

Mr. G. L. EDMUNDS, M.P.S., Trevethin, Barnett Lane, Kingswinford, Staffs, left £9,344 (£9,287 net).

Mr. T. S. Herd, M.P.S., Prior Manor House Corbridge-on-Tyne, Northumberland, left £8,97 (£8,809 net).

Mr. W. Sugden, M.P.S., 25 Kimberley Avenue Blackpool, Lancs, formerly of Gargrave, Yorks left £1,294 (£1,258 net).

Mr. J. R. TAYLOR, M.P.S., 19 Carlton Road Workington, Cumberland, left £58,617 (£58,29) net).

Mr. W. R. RENNIE M.P.S., Medwyn, Statio Road, and 48 Main Street, Biggar, Lancs, lef £8,752.

Mr. J. W. Sterling, M.P.S., 26 St. Mary' Avenue, Whitley Bay, Northumberland, left \$\&70\$ (\$\£654\$ net).

Mr. J. F. Edden, M.P.S., I Freelands Road Bromley, Kent, formerly of Eton Avenue, Swis Cottage, London, N.W.3, left £511 (£460).

Mr. J. Simpson, M.P.S., West Bank, West Road Peterhead, Aberdeens, and 90 Queen Street, Peter head, left £20,592.

Mr. F. S. HIGGINS, M.P.S., Eversley, Wedgwood Road, Felpham, Sussex, left £9,942 (£9,70 net).

Mr. D. B. Richardson, M.P.S., 5 Magdale Cottages, Musselburgh, Midlothian, and 158 Da keith Road, Edinburgh, left £3,581.

MR. S. T. MILBANK, Ph.C., North Stree Bishop's Stortford, Herts, left £26,029 (£25,80 net). He left £50 to the Pharmaceutical Society Benevolent Fund.

MR. G. E. BUTLER, M.P.S., 97 Marina, S Leonards-on-Sea, Sussex, formerly of 37 Higl land Road, Bromley, Kent, left £6,427 (£6,3: net).

MR. G. L. WESTMACOTT, Ph.C., Sandhur Congleton Road, Alderley Edge, Cheshire, former of Hurlbote Grange, Handforth, Ches, left £79,2 (£76,253 net).

Mr. P. Horsfield, M.P.S., Woolpack Hote High Street, Romford, Essex, formerly of Otle Yorks, and of Lynchford Road, Farnboroug Hants, left £1,588 (£1,546 net).

PERSONALITIES

Mr. A. T. Bradford (manager, purhasing department, Parke, Davis & Co., Ltd.) retired recently after forty-five years' service with the company.

Mr. John Charles Shenton, M.P.S., he recently elected president of the Black-



pool Branch of the Pharmaceutical Society, is chief pharmacist at the Victoria Hospital, Blackpool. He served his apprenticeship at Richardson & Co., chemists, Promenade, Blackpool, and after study at Manchester University, qualified in 1932. After a short period of service London the at

Clinic and Nursing Home, he took up an appointment as pharmacist at Victoria Mr. Hospital. Shenton has been a member of his Branch committee for six years. He took an active part in the organisation of the 1949 meeting of the British Pharmaceutical Conference in Blackpool, acting as chairman of the transport committee. He was elected a member of the Blackpool Pharmaceutical Committee in 1948 and appointed its secretary in 1949.

Mr. W. John Merrick, M.P.S., has been elected vice-chairman of the Liverpool and District Publicity Association. In addition he is the Association's delegate to the club development committee of the Advertising Association and represents the Association on the Fédération Internationale des Clubs de la Publicité.

ALDERMAN R. MILO TURNER, M.P.S., has been appointed a member of the management committee of the Lichfield, Sutton Coldfield and Tamworth Hospital Group. In May he was re-elected chairman of the Tamworth, Staffs, borough public health committee, a position he has held for fourteen years.

MR. EDSON F. WOODWARD, a director of C. F. Gerhardt, Ltd., 5 Fenchurch Street, London, E.C.3, returns this week to the United States with his family. Mr. Woodward is a skilled pharmacognosist, a graduate of Massachusetts College of Phar-

macy, from which he qualified as a pharmacist in 1939, obtaining a Master degree in 1941. In 1949 he was joint leader of a botanical expedition in Africa to search for strophanthus. For a number of years he has been concerned with foreign commerce in drugs and fine chemicals. Since arriving in Britain in January of this year, Mr. Woodward has been actively engaged in the reorganisation of the company, and on April 1 was joined by Mr. R. Gordon Archer, who was subsequently appointed managing director. On his return to the United States, Mr. Woodward will continue as a director of C. F. Gerhardt, Ltd.

ALL three London evening newspapers on August 16 published a photograph of the twenty-one-year-old triplets (Anne, Allan and Patricia) of Mr. A. Shepherd, M.P.S.



(Publisher of The Chemist and Druggist). At the time the announcement of their birth on August 15, 1931, appeared in the C. \mathcal{C} D. (1931.II.255) Mr. Shepherd was a member of the editorial staff of the paper.

BUSINESS CHANGES

Medical Apparatus, Ltd., are removing on August 30 to 90 Fenchurch Street, London, E.C.3 (telephone: Royal 4417 (unchanged)).

WOODFIELD COOKE, LTD., 33A Old Bidston Road, Birkenhead, Ches, have been allotted premises for a pharmacy on a new housing estate at Woodchurch, Birkenhead.

Appointments

WATFORD CHEMICAL Co., LTD., 30 Baker Street, London, W.I. have appointed Mr. S. Beach their representative in Scotland and in Northumberland and Durham.

PHOTOGRAPHIC NOTES

THE following items have recently been added to the range of goods available from Ilford, Ltd., Ilford, Essex.

Parallax Attachment.—Even though a brilliant or twin-lens reflex camera may be compensated for parallax, the compensation cannot normally be equally effective at all distances. With subjects at close



range incorrect placing of the camera can result in some of the subject being cut off. The Ilford parallax attachment screws on to the top of the tripod and in the closed position of the attachment the picture is composed. By slackening a large screw on the side of the tube the inner tube (to which the camera is fitted) may be raised and again secured. A careful test confirmed that the view and composition obtained on the negative is then identical with that seen on the ground-glass screen. The bush in the base of the attachment has a Continental thread (which can be converted where necessary by fitting a sixpenny "Continental-to-English" adaptor).

Photographic Bulbs.—A wide range of bulbs is now supplied by Ilford, Ltd., for use in lighting equipment, projectors and enlargers. The enlarger bulbs, one tested by the writer, are coiled coil, gas-filled lamps, sprayed internally with silica to

provide excellent diffusion with low ligh absorption. The bulb seen was well made and of first-class finish; in use it gave pe fectly even illumination in the enlarge and exposures were comparable with tim required by other bulbs in everyday us In comparing the performance with that an opal bulb, intensity, fine diffusion, eve illumination and exposure times appeare identical. In addition to the enlarg bulbs there are those for studio spotligh for normal studio use, a range of twen for all types of projector, reflector bul for use without a separate reflector as Broadside and Photoflood bulbs in seri 1 (2-3 hours' life) and series 2 (6-8 hou life).

Darkroom Apron. — Of light-weig plastic, the new apron, illustrated, replace the rubber-covered cotton apron previous offered and gives complete protection the clothes against even strong acids.



size is 3 ft. by 2 ft. 3 in. Plastic taj for securing the apron pass over the sho ders and round the waist to be tied at t back. At 14s. 5d. the apron should be ready seller to amateur photographers w undertake their own darkroom work.

Heavy-weight Tripod.—The new Ilfot tripod is not too heavy—it weighs about 3\frac{3}{4} lb.—but it is rigid when extended a

eedy in erection. The legs have four ctions, which are locked in any position a half-turn of one section inside to ther. Rubber feet are fitted to prevent ipping on smooth floors; the legs are so mly held in the head that they will not de further apart than the distance at hich the user places them. The head is und (diameter 2\frac{3}{4} in.). The Continental rew is fitted to a long handle, which akes for ease in securing the camera to e tripod, the handle turning the screw to the camera tripod bush. The screw in, of course, be fitted with an adaptor here necessary, or easily re-threaded by ling a \frac{1}{4}-Whit, die-nut. Length of the ipod closed is 18 in. It has a length of in, when open.

Body Tripod. — The keen miniaturist ould be found to appreciate this useful tle accessory because of his eternal need ensure perfect camera steadiness for all

shots which he wishes to have enlarged. The "tripod" is simply a single support column made of two tubes, one sliding inside the other and being secured at any height merely by turning one in the other. The upper end is fitted with an English thread screw and the lower end has a bush with a Continental thread. A black woven cord passes through the base of the lower tube and is in the form of an adjustable loop which is long enough to permit slipping it over the user's head. In use, the camera is mounted on the column and is pressed downward, the cord around the photographer's neck takes the strain and considerable rigidity is thereby gained, making even "short-time" exposures without movement quite possible. By adjusting the height of the tubes and the length of the cord, the camera may be held comfortably at eye level. The length when closed is 8½ in., opened, 14½ in. The weight is 3 oz.

A DENTIST-DESIGNED TOOTH-BRUSH

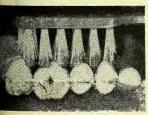
r a meeting in London recently a leadg member of the dental profession exained with illustrations the principles hind the evolution of a new Halex buble-duty brush introduced by Halex,

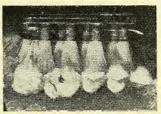


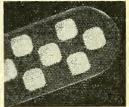
Halex " double-duty " tooth-brush

d., Highams Park, London, E.4. They clude the requirements of softness for masging the gums, and that the brush should fine enough to penetrate small crevices tween the teeth, That "double duty" ggested the name that has been adopd for the new brush. In his talk the ecialist screened illustrations of the gum a dog, showing how gentle massage

stimulated growth of the keratinised outer protective layer of the gum, but that hard brushing destroyed it and paved the way for infection and destruction of the whole gums commonly known as pyorrhæa. The fillings of the new brush are made of 0.009-in, diameter Nylon fibres which splay and fill the crevices between the teeth. The tufts are of equal length and are "staggered" so that a complete brushing surface is provided. The handle is straight. The recommendation was made that the brush should be used first along the biting surfaces of the teeth; then in turn along the two sides and front surfaces of the teeth, brushing in very small circles so as to massage the gums in both directions as well as to clean the teeth; finally cleaning the inside surfaces. The brushes as issued by the makers are packed in hermetically sealed cases.







eft: Normal tooth-brush on surface of molar teeth. Centre: Extra spread and penetration given by the lalex "double-duty" brush. Right: Shape and arrangement of tufts in the new brush.

TRADE NOTES

Twin-cup Vacuum Flask.—The Frezeheat Twinkup vacuum flask issued by the British Vacuum Flask Co., Ltd., Lissenden Works, Gordon House Road, London, N.W.5, is fitted with a Koolgrip cup at each end. It is available in six colours or in combinations of the colours.



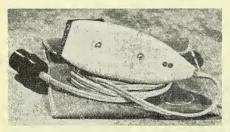
Display Outer.

To link with
the "biggest campaign in the history of t i s s u e
handkerchiefs in
Britain," Cellucotton Products, Ltd.,
33 Aylmer Parade,
London, N.2 have
introduced t h e
counter display
unit illustrated.

Dispensing Packs.—The Armour Laboratories (Armour & Company, Ltd.), Lindsey Street, London, E.C.1, have secured Customs and Excise approval for dispensing packs (40-02., 80-02., and 1-gall.) of their liver and yeast concentrate. The new packs will be available from August 25.

Free "Counter Salesman." — With orders of six doz. 2-oz. size tins or cartons of Gee's linctus pastilles, Rodmill Chemical Co., Ltd., Islington Row, Liverpool, 3, are supplying free a "counter dispenser salesman" illustrated on another page of this issue,

Dual-voltage Electric Shaver. — For users who travel abroad and for export, Chilton Electric Products, Ltd., Hunger-



ford, Berks, have introduced a dual-volt Kub, which by simply removing the shaver head and giving a screw a half turn, changes from 110 to 230 volts thus providing service at two different voltages. The dual-volt Kub electric shaver retails at 95s, inclusive of purchase tax.

Otto of Rose. — Wilson & Mansfield Ltd., 15 Philpot Lane, London, E.C.3, and distributors in London, Paris and New York of the SK brand otto of rose produced by the Organisation Suleyma Konur, Istanbul, Turkey (distilleries & Isparta, Atabey, Ilyas and Keciborli Anatolia).

Formula Improved.—Forsters (Pharm: ceuticals), Ltd., Seaham, co. Durhar have improved the formula of Ventralk peptic-ulcer treatment so that the bitterne associated with phenobarbitone is elimin ted; the tablet now dissolves easily in the mouth (use of water optional); and, he cause of the size of the tablets, overdosat is unlikely.

Vaginal Cream and Applicators.—I supplement the use of Penotrane pessari for the treatment of vaginal infections i cluding trichomonal vaginitis and moni asis, Ward, Blenkinsop & Co., Ltd., Henrietta Place, London, W.I, have i troduced Penotrane vaginal cream (2-ctube) and Penotrane vaginal applicate (disposable) (cartons of fourteen). Pen trane dusting powder, which hitherto h been supplied only in polyethylene i sufflating containers is now available in carton containing three I-gm, plastic tub of the powder,

Bottle Redesign.—A new round bot adopted by Newton, Chambers & Co., Lt Thorncliffe, Sheffield, retains the gener

Germin

silhouette of the old foursided one familiar for over sixty years. The new design was prepared by the company's advertising agents F. C. Pritchard, Wood & Partners, Ltd., under the general direction of Mr. Harry Jones, N.R.D. A single label, printed in the red, green and white of the Izal range and bearing the familiar trade mark of the green cross, takes the place of the four labels used previously. A new cap of white plastic helps to give a pleasing " streamlined " appearance. For occasions when only a few drops of Izal are needed (for example, when used as a

gargle or mouthwash) a new me screw-on sprinkler top allows them to shaken out. With the sprinkler remove the fluid may be poured out in any qua ty. The new bottle is packed in cases ontaining two doz, 6-oz, bottles. It is eing nationally advertised to the public.

Vibrating-figure Display Unit.—In a right and novel counter display unit in-



troduced for Potter's catarrh pastilles by Potter & Clarke, Ltd., 60 Artillery Lane, London, E.I, the "boxer" (a pastilles - and - springwire figure) sways and dances at the slightest vibration of touch. The whole boxing-ring scene dramatises the new slogan for the product—"Try this Fighting For-

rula" — now being featured in national dvertising. Attached to the back of the isplay is a special holder that accommotes I doz. tins of Potter's catarrhastilles. Messrs, Potter & Clarke state

that they have been agreeably surprised at the demand already received for the display unit, deliveries of which were not scheduled from the makers until mid-September. They give an assurance, however, that every request received will be met so scon as supplies are available.

Children's Safety Hot-water Bottle. -The Father Bear bottle hot-water illustrated is of a larger size than the normal children's range of hot-water bottles issued by William Freeman & Co., Ltd., Peel Street, Barnsley, a longer giving time before the Probottle cools. duction has commenced, and a limited number are at present available from makers.



NEW PRODUCTS AND PACKS

Dapsone Tablets.—Allen & Hanburys, td., Bethnal Green, London, E.2, offer ablets of Dapsone, B.P.C., 100 mgm., in ottle of 100 and tin of 1,000.



First Stick Deodorant. - Delavelle (Sales), Ltd., Street, Old London, W.1, have introduced Go deodorant stick, claimed to be the first of its kind. "You just stroke it on." It dries immediately, and is harmless to clothes. Go has an irridescent pack with clip-on top.

Antihistaminic Cream.—Abbott Laboatories, Ltd., 3 Wadsworth Road, Perivale, Middlesex, announce the introduction of Di-Paralene calamine cream (list No. 3995), an antihistaminic and antipruritic cream supplied in 1-oz, tubes.

Plain Soap. — The Albion Soap Co., Ltd., 30 Thames Street, Hampton, Middlesex, are marketing in wrapped tablets under the name Simple soap a pure unperfumed toilet soap without colouring or fillings. Advertising is appearing in medical and nursing journals. It is available through wholesalers or direct.

New-type Feeding Bottle. — Equipped with a "double-action" teat that "breathes as it feeds," the Modern Nurser feeding bottle manufactured by Cannon Rubber Manufacturers, Ltd., Cannon Works, Ashley Road, London, N.17, has a wide neck for easy cleaning, is heatresistant, and is calibrated in oz, and c.c.'s. All parts are built to be boiled, allowing both bottle and teat to be kept sterile.

Peptic Ulcer and Rheumatism Treatments.—The Theraproduct Laboratories, 2 Central Parade Catford London, S.E.6, announce the introduction of Anavitin tablets for peptic ulcer, presenting anion-exchange resins in association with ascorbic acid in bottles of fifty and 100 and dispensing pack of 500; and of Dolexin antirheumatic and analgesic, which combines salicylamide with aneurine hydrochloride and ascorbic acid. It is issued in bottles of fifty and 100, and dispensing pack of 500.

PROBLEMS OF NEW ZEALAND PHARMACY

From Our New Zealand Correspondent

Since 1942 the cost of dispensing prescriptions under the New Zealand health service has quadrupled. The number of prescriptions dispensed and the average cost per prescription have both doubled. The estimates for the year ended March 31, are: More than 8 million prescriptions dispensed at a cost of nearly £25 million. When New Zealand export prices soared in 1951 almost all the country's internal spending increased too. There is continued pressure on the Health Department to include on its "free list" the newer and more expensive drugs. One of the arguments advanced is that each new "wonder cure" would save so much expenditure on established drugs that its inclusion would not further burden the Fund. That, however, never happened in practice.

Drug Tariff Additions

In November 1951 the British Pharmaceutical Codex, 1949, together with a large number of antihistamines were recognised almost in toto by the Fund. Then, following the Empire finance talks in London, a sudden curb was placed on all spending. Drugs have been included only indirectly and fairly late. It appears that the average prescription price has jumped from about 6s. to nearly 7s, within a few months and that oral penicillin tablets have been the biggest cause (500,000 unit tablets cost the Fund three shillings each).

From August no more than ten such tablets may be ordered as a charge on the Fund. Another attempt is being made to curb so-called excess prescribing. Doctors for some years have been allowed to order up to thirty days' supply per prescription. Many order enough for fifteen days with one repeat. A large proportion of those repeats have not been taken up by patients, so from August the Health Department is making the latter method the mandatory maximum allowable (an Extended Order system still holds good for three months' supply for chronic cases).

No generally approved method of introducing new drugs has been evolved. In August isoniazid was added to the list of drugs obtainable through Hospital Boards only. Aureomycin and chloramphenicol are already on that list. Whether those are then released for in-patients only or on general practitioners' prescriptions has been at the discretion of the Hospital Boards. To save hospitalisation it often seems best to issue prescriptions for outpatients. However, that issue is likely to be discontinued also.

Wages in New Zealand have been under general survey by the Arbitration Court and a levelling up of all wages has been sanctioned. Recent individual rises have been ironed out by an order that a certain 14s. weekly rise should be granted. This means that from September 1 pharmacy employees will receive a rise of approximately 9s. a week because they have already received a 5s. award rise earlier in the year The employers want to know where that is to come from. It would be simple to add a fraction of a penny to each dispensing fee, but as yet government depart ments have not conceded such a method of adjustment. They can claim that extra profits from a fixed percentage oncost or more expensive drugs has compensated chemists for the extra outlay in wages.

Our Industrial Efficiency Act (under which pharmacies are licensed) is at present under review in Parliament. session the stated intention of the Government was to repeal the Act and to place under separate Acts those industries tha it considered still to require some measure of control. Pharmacies (670 in number were among those who were to receive restrictive control to prevent the inroad of large monopolies while young and pro mising industries were to receive "promo tive "control. Separate Acts are expected later in the year, but preparation for them is in the hands, at present, of only one section of pharmacy—the advisory com mittee directly responsible to the Minister of Industries and Commerce.

Drugs Litigation

Along with some Australian and Ameri can States we are having litigation con cerning the general sale of aspirin, phen acetin and caffeine tablets. As long age as 1948 the Pharmacy Board tried to establish that phenacetin and caffeine wer drugs under the Pharmacy Act and tha their sale was the concern of chemist solely. That was upheld in a lower Cour and in the Appeal Court. The proprie tary right of a specific brand was the contested and in two more decisions the Pharmacy Board won. However, a appeal by the defendants to be allowed to go to Privy Council has been sanctioned

DEVELOPMENTS IN IRISH HERB FARMING

INCE the publication of an article dealing with the work of Mr. C. O'Connor, A.P.S.I., in growing medicinal herbs in he Republic of Ireland (C. & D., 1951. 1,222), the project has been further deeloped.

The first electric drying ovens have been installed at the Leixlip farm and he farm buildings have been connected with the electricity supply. The 1952 crop



Mr. Christopher O'Connor shows students a sample of belladonna in the drying trays.

of belladonna was the first to be dried n the new ovens. Covering some forty acres, the herb crops now in cultivation at Leixlip include stramonium, hyoscyamus and elecampane. To place the undertaking on a well capitalised footing a new company was recently formed with such well known Irish pharmacists amongst the directors as Messrs, P. A. Brady, D. Woulfe, P. F. McGrath, J. K. Whelehan, G. C. O'Neill and M. Costello. Mr. O'Connor is the managing director of the company.

Land Provided

Another important development in 1952 was when Lieutenant-General Michael Costello (managing director of the Stateowned Sugar Co.) seeing industrial possibilities of importance to the country in the project, placed at Mr. O'Connor's disposal a large area of reclaimed bog land at Gowla, co. Galway, for the planting of the first experimental crops of spearmint and peppermint. The fullest co-operation was given by the Sugar Co. to the project. It is reported that excellent crops of both spearmint and peppermint will be ready for harvesting and distillation in September. Owing to prolonged dry weather in June and July, it looked as if the peppermint was not doing well, but the moist character of the bog soil together with rain in August has produced satis-

factory results. The first distillation of the essential oils from Irish grown spearmint and peppermint will be made at the Sugar Co.'s factory at Tuam, co. Galway, under the direction of an Irish specialist in distillation. If the results are satisfactoryas they are expected to be-the production of oils of peppermint and spearmint from waste Irish bog land may become one of the Republic's best dollar and sterling earners. One of the largest toothpaste manufacturers in the United States is very much interested in the present experiment. Several inquiries for first samples of the Irish spearmint and peppermint oils have also reached Mr. O'Connor from Britain. Once the success of the Gowla experiment has been established, hundreds of acres of bog land in the West of Ireland that today only grow heather and sphagnum moss will be reclaimed and turned over to the production not only of spearmint and peppermint but also to the growing of lavender and chamomile

Humid Climate and Bog Soil

The new industry will provide lucrative work for the small farmers of Connaught who may be given acreage contracts to grow the crops. In Mr. O'Connor's view the humid Irish climate and bog soil are admirable for the production of high grade spearmint and peppermint plants. After the first distillations in Sep-



Pharmacy students at the herb farm, Leixlip.

tember samples of the oils will be sent to England and the United States for appraisal. Favourable reports from England and America will be the signal for large-scale cultivation and production to be proceeded with. Concurrently with the present scheme, Mr. O'Connor has plans for the collection of many valuable medicinal herbs and plants growing wild on Irish bogs. Examples are *Drosera*, or sundew, bogbean and butterwort, all of which are in good demand.



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Official organ of The Pharmaceutical Society of Ireland, The Pharmaceutical Society of Northern Ireland, The Chemists' and Druggists' Society of Ireland and of other Chemists' Societies in the Empire.

VOL. CLVIII August 23, 1952

No. 3783

A Hint of Proprietaries Control?

THE control of proprietary remedies was referred to by Sir Weldon Dalrymple Champneys at a meeting of Nottingham medical practitioners (see p. 247) as one of the most difficult with which his Department (the Ministry of Health) has to deal. The truth of that remark will be agreed by many whose views hardly coincide with those of Sir Weldon. Unnecessary multiplication of standard preparations is an admitted evil, but if much of the 40 per cent, proprietary preparations account in the National Health Service drug bill is caused, as he alleges, by the prevalence of medicines of "doubtful therapeutic value at high prices," then the situation is indeed "intolerable." Accurate information is not forthcoming as to the proportion of the drug bill such unwanted preparations comprise, but if it is as high as his remarks suggest, medical practitioners are in worse shape in distinguishing the true from the false than we had supposed. If it is altogether more modest a proportion, then he is casting an unwarranted slur on his medical colleagues.

Nor would Sir Weldon venture on a solution of the problem he propounded except to hint that a continuance of multiplied proprietaries might result in legal powers being taken. The experience in France has been that when registration of proprietaries became compulsory the number of them decreased greatly, and presumably some such result is longingly sought in Britain. For ourselves, we remain of the opinion that voluntary adher-

ence to an agreed code by all sections of the pharmaceutical industry would be more creditable and more acceptable than imposed action from official quarters.

Sterling and Non-Sterling Trade Ratios

CHANGES in the ratio of sterling-area to dollar-area exports during the past eighteen months are revealed by figures tabulated in the August issue (Vol. III, No. 8) of the Report on Overseas Trade prepared by the statistics division of the Board of Trade. The general effect is that the excess of imports over exports and re-exports has come down much more sharply in the non-sterling than in the sterling areas.

The January-June excess of imports (c.i.f.) over exports and re-exports (f.o.b.) was at the rate of £78 millions a month, £22 millions a month less than in 1951. Of that reduction, over £19 millions was in trade with the non-sterling area, and less than £3 million with the sterling area. Partly as a result of restriction of imports enforced in November 1951, the monthly rate of non-sterling imports has been reduced from £230 millions (c.i.f.) in the second half of 1951 to £209 millions in the first quarter this year and £186 millions in the second quarter.

Exports to the sterling area increased quarter by quarter in 1951 to a peak in the first quarter this year, but restrictions on imports imposed by a number of Commonwealth countries early this year reduced the rate of export in the second quarter to only 1 per cent. more than

in the first half of 1951.

In chemicals, dyes, drugs and colours, average monthly imports in January to June were 17 per cent. down on the monthly average for 1951. In the first and second quarters of 1952 they were valued at £17,602,000 and £9,635,000, against £17,490,000 and £16,989,000 in the third and fourth quarters of 1951. Exports of chemicals, on the other hand, were from January to June, 13 per cent. above the monthly average for 1951; in drugs and medicines level; and in dyes and dyestuffs 10 per cent, below. The 1952 first and second quarter

values of £7,810,000 and £6,960,000 for chemicals should be set against 1951 third and fourth quarter values of £7,130,000 and £7,240,000. In drugs and medicines the corresponding values were £2,990,000 and £2,960,000 against £2,940,000 and £2,980,000 respectively. No great difference existed in June between exports of chemicals to non-sterling areas (£1,821,000) and the rest of the world (£1,762,000).

Germany's exports of pharmaceutical products, which were more than double in 1951 the 1950 total, declined in May from the first quarter average of DM12.530.000 to DM11.040.000.

Disposal of Uncollected Goods—1

Goods left for repair or other purpose and not collected have, in the past, often caused embarrassment to chemists and others. The Disposal of Uncollected Goods Act, 1952, makes legal the disposal of such goods where the trader has been put to expense.

The Act applies in relation to the bailment of any goods accepted before or after the commencement of the Act (August 1, 1952) by the bailee (i.e., the trader) for repair or other treatment on the termsexpressed or implied-that they will be redelivered to the bailor (i.e., the customer), or in accordance with the customer's directions, when the repairs or other treatment have been carried out and on payment to the trader of such charges as may be agreed or as may be reasonable. Where the goods are ready for redelivery but the customer fails within a reasonable period (twelve months) either to pay the charges and take delivery of the goods or to give directions as to their delivery, the trader may sell them, subject to conditions,

The conditions are that a notice must be displayed at all premises of the trader (whether or not the goods are accepted at any particular premises) indicating that acceptance of the goods for repair or other treatment is subject to the provisions of the Act, and that the Act confers on the trader the right to sell the goods after an interval of not less than twelve months from the date when the goods are ready for redelivery. When the goods are so

ready, or after the commencement of the Act, the customer must be notified accordingly of the charges stated; and, for the Act to operate, a statement must be included that, the goods are liable to be sold in accordance with the Act if the customer fails within twelve months from the date of the notice to take the good and pay the charges.

If the goods are not taken and the charges paid within the twelve months period, and the trader proposes to sell the goods, he must notify his intention, quoting the date on which the notice was given that the goods were ready for redeliver and allowing fourteen days for the good to be taken and the charge paid. The notice of intention to sell must be sent be registered letter.

The goods of one customer must not b disposed of in a lot with goods of anothe customer. They must, with certain excer tions, be sold by public auction. The res son is that the trader is required to ac count to the customer for any surplu after he has deducted his own charge and must keep records of the sale. "public auction" requirement need no be followed if, in addition to the other matters of which notice has been given th trader states in the notice the lowest price he is prepared to accept on a sale of th goods. He can then sell the goods in ar way at a price not less than that me tioned in the notice. If the goods on sale realise more than the charges owing the trader, the customer may recover the excess. If, on the other hand, the trader charges exceed the proceeds of the sal the amount of the excess is recoverab from the customer.

Where goods are sold, the trader mu within seven days of the date of sale, ma the following records of the transaction Description of goods; method, date a place of sale; name and address of autioneer if sold by auction; name a address of buyer; where goods are so by other methods and the gross proceed are 20s. or more, the amount of greproceeds of sale; and statements of eattern of charges of trader in relation to the goods and the transaction to which eattern relates.

CORRESPONDENCE

Letters may be sent for publication under an assumed name, but the correspondent must furnish his real name and address to the Editor

"Summit Wrong"

SIR,—At a country pharmacy a few days go where I was acting as locum tenens an ld countryman handed an N.H.S. precription to one of the assistants. "This vill be ready in half an hour," she said, Can I have a shilling please? ""But," ays the old chap, "I paid a shillin' last ime. There's summit wrong!"

Bournemouth. A. A. J. AKHURST.

Medicines in Soft Drink Bottles

SIR,—A year ago I took my "annual" rescription for a cough medicine to a ocal chemist. I handed in an ordinary raduated medicine bottle. When I called or it an hour later the lady assistant very indly handed me a big (proprietary) barry water bottle of mixture! Pensioner.

SIR,—I think it is more than time that Il types of branded soft drink bottles were banished" from the pharmacy and not sed in the pharmacy in any circumstances. really think there is no excuse nowadays or their use as drug containers even in he poorest district. It used to be a comnon occurrence for a client to bring lemonade bottles for medicines, but those days are past—or ought to be. By abolishing heir use once and for all for other purposes than that for which they were inended chemists will rise above any slur pon their reputation. It ought to make to difference to them whether it is legal Pharmacist.

Far-from-scurvy Conduct

Sir,—The Society's Council are to be ongratulated on their suggested code of professional conduct. "Sandy MacSneech" C. & D., August 16, p. 233) takes strong bijection to item 7: "The Pharmacist hould not be associated with a drug store." If, as he says, this was decisively defeated it the Branch Representatives' meeting, hen that is a shocking state of affairs. Any pharmacist worthy of the name who is content to serve in a drug store should be stracised and his name removed from the register. If pharmacy is to be a profession, is it certainly ought to be, it must eliminte all those who abuse their qualification -I say this quite frankly and seriously by serving in stores. I am confident that the Council—composed, as I would hope, of members who are sincerely desirous of raising our status—will win the day and carry out their suggested code of ethics. Every member of the Society who has the honourable position of pharmacy at heart will give our Council 100 per cent. support in this matter. And "Sandy MacSneech" should do so too, for he will find that it will be to his advantage.

St. Andrews. A. W. Keith.

Co-operation from Chemists

Sir,—Referring to the letter of Forsters (Pharmaceuticals), Ltd., Seaham, co. Durham, "Lack of Support" (C. & D., August 16, p. 232), I am quite surprised to learn of his experience with chemists as to alleged non-stocking or difficulty in supplying doctors' requirements. There surely must be some reason for this. In our own business we have usually no difficulty in supplying ethicals prescribed by doctors, though some wholesalers are non-cooperative at times and we have had difficulty with some who were supposed to be "stockists" and when approached in urgent cases failed to produce the goods. This has happened not only once but several times. Still, we never let our clients down, nor our doctors, even though it costs a telephone call and passenger train expenses, which are not recoverable. There is another aspect of ethicals. They are usually fairly expensive and it is not possible for all chemists to stock every one, while doctors can be a little changeable. If a persuasive traveller calls upon a practitioner explaining in voluble language the superiority of his company's preparation in comparison with another, it is quite possible and feasible for the prescriber to be carried away and to switch over to another and similar product, leaving the chemist with the "baby" to hold, while causing him extra expense by having to procure another ethical. Is it not possible for such manufacturers to get together and cut out a lot of this competition and allow the original firm to market its preparation without others trying to cut in? I know this suggestion may involve possibilities of abuse, but surely there is and must be a way out. Mr. Forster's remarks deserve thanks all the same, and I hope that as a result of it chemists will be a little more co-operative in future and not give the impression that "they don't really care." Scottish Chemist.

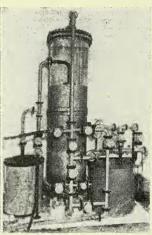
PURE WATER FROM ION-EXCHANGE RESINS

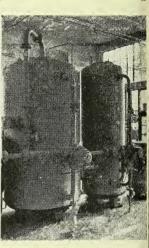
RECENT developments in ion-exchange resins have made possible the preparation of abundant supplies of deionised water of such purity that, for example, momentary exposure to the atmosphere increases its conductivity. The ease with which the deionised water may be prepared (by percolation) has been utilised by pharmacists and pharmaceutical indus-

occurring zeolites. The sodium atoms of these sodium alumino-silicates may be exchanged for other cations, for example calcium.

Work was next directed to the manufacture of synthetic zeolites, which have proved to be of greater capacity. Meanwhile zeolites were used for softening water by removing calcium and substituting







Portable two-bed demineralising plant.

Mixed bed plant (with transparent chamber)

Large industrial two-bed plant.

tries in many countries, notably France and America. Bulk supplies can be prepared having a specific conductivity of about 0.1 x 10⁻⁶ mho/cm.³, which is comparable with the s.c. (0.043 x 10⁻⁶ mho/cm.), of the purest conductivity water ever made (by Kohlrausch with forty-two reduced-pressure distillations), Even laboratory apparatus produces as much as 20 litres of demineralised water each hour.

The phenomenon of ion exchange is not new. The exchange of cations in the soil, in fact, enables plants to get their mineral foodstuffs and the soil to hold the salts so that they are not washed away by rain. Some early research on ion exchange used clay, and it was found by J. T. Way and H. S. Thompson in 1850 that if water containing calcium ions were poured on to a column of sodium clay, the calcium ions were retained and sodium ions substituted in the water flowing from the column. Later, in 1905, similar facts were observed by Gans, using a number of naturally

sodium ions. In 1934 Liebknecht found that sulphonated coal had cationic exchange properties. Sulphonated coal may be represented as follows:

It may be regarded as an insoluble acid, the hydrogen of the sulphonic group being replaceable by sodium, calcium, magnesium, or other cation. It has the advantage over naturally occurring silicates of being stable over a wide ph range. In 1935 Adams and Holmes made the first cation-exchange resins first by condensing polyhydric phenols with formaldehyde and late phenol sulphonic acids with formaldehyde The hydrogen of the phenolic group of sulphonic group is replaceable. Anionic resins were also prepared, using meta phenylenediamine with formaldehyde, the resulting resins acting as though they were insoluble alkalis, taking up anions such a chloride, sulphate and nitrate, Reactions

can be represented as shown above.

The reactions are reversible, so that the resins can be regenerated. For example, a cationic resin that has taken up, say, sodium to capacity (fig. 1) can be regenerated by being flushed with an acid; producing acid resin and the sodium salt of the flushing acid in solution, which is rejected. Similarly an anion resin that has taken up acid to capacity (fig. 2) is regenerated with an alkali, such as sodium carbonate, the free base resin, sodium chloride (or other sodium salt) and carbon dioxide being produced. The stability of the resins is important, as on it depends their solubility in the final water. Resins were developed commercially up to the outbreak of the 1939-45 war and again during the post-war years. Resins of greater capacity and stability have been elaborated, and examples are now being produced that will withstand water at any temperature up to boiling point.

Practical Principles

The basis underlying the practical deionisation of water is a two-bed system. The water to be treated is first percolated through an acid resin which removes the cations and then through a basic resin, which removes the anions. The resulting water is then theoretically free from electrolytes, except for carbon dioxide in solution. That can be removed by blowing a stream of air through the water. In 1942 it was found that, if the two resins were mixed, the resulting water was of a better quality, and beds of mixed resins were used for preparing pure water for the armed forces. The process had the disadvantage at that stage that the mixture could not be regenerated and the resin had to be discarded when it had become exhausted. Later, an anionic resin was manufactured with a lower density than the cationic resin, and that allowed the two resins to be separated by backwashing with water, the denser cationic resin forming a layer on the bottom with the anion resin on top.

By a suitable arrangement of nozzles, each layer can be flushed with the regenerating fluid and washed, and the two resins mixed again for use by swirling with a stream of air. The reason for the greater efficiency of the mixed beds is that adjacent particles of acidic and basic resins

act like a complete acidic or basic bed on a small scale. The total effect of percolating water through a mixed column is therefore equivalent to passing the water a long series of two-bed In addition to the carbon through systems. In addition to the carpon dioxide (which was removed by blowing), the water produced by the carly resins contained traces of silica, which were not taken up from the raw water. Work was therefore done on elaborating an anionic resin which, by behaving like a strong base—for example like caustic soda-removed carbon dioxide and silica (in a form analagous to sodium silicate). The resin is in fact an insoluble highly basic quaternary ammonium compound. Caustic soda is necessary to regenerate it. The resin was first applied to a three-bed system consisting of (a) the acidic and basic resin beds, (b) the blower to remove most of the carbon dioxide, and (c) the highly basic bed to remove the last traces of carbon dioxide and the silica.
Water produced in this way is faintly alkaline, which is of advantage if it is to be used for feeding boilers.

Logical Developments

A further logical development was to use. a bed of the strongly basic resin as the second unit in the conventional two-bed system, the first unit being the cationic resin as usual. The strongly basic resin thus removed the silica simultaneously with the mineral acid anions. For economic reasons the carbon dioxide was removed by a degasifying tower arranged between the two units. The water produced was of somewhat better quality, and contained no free alkali. The highest quality of water was obtained, however, by the use of a mixed bed containing a strongly acidic and a strongly basic resin either following the conventional two-stage deionisation or fed directly with the raw water. In the water so produced no known test measures the amount of (a) calcium, magnesium, sodium ions or (b) bicarbonate, carbonate, hydrox-

ide, phosphate, chloride, sulphate or nitrate. The silica content is less than o.1 part per million; iron less than o.o. p.p.m.; and total dissolved solids less than I p.p.m. There is no turbidity, and the electrical conductivity is less than 0.5 gemmhas at 20°C. An appreciable fraction of the organic matter in the raw water is removed by the deionisation beds, but a trace remains in the treated water. However, the test for organic matter is usually well within the pharmacopæial limits. Pyrogens are not removed by the resins. They can be removed by treatment with activated charcoal, but at the expense of the conductivity, as even the purest charcoal usually puts ions into the water.

The cost of maintaining an ion-exchanging plant is largely that of the regenerating materials—chiefly sodium carbonate and sulphuric acid, which are among the cheapest of compounds. When producing purified water at the rate of about 5,000-10,000 gall, per hour the cost is about 5 per cent. of that of distillation, rising to 10-20 per cent. for small quantities.

Available Plant

The Permutit Co., Ltd., Gunnersbury Avenue, London, W.14, who have pion-eered ion-exchange resins in Great Britain, make plant in sizes to meet all requirements. The company's portable plant produces 11 pints of demineralised water per minute. Like all the other models, it is equipped with a conductivity-measuring instrument, which constantly measures the quality of the water. With average water the output per regeneration is 50-75 gall. There is scarcely any upper limit to the size of the plant. Industrial models are made which automatically stop production when the conductivity reaches a certain limit, are automatically regenerated with acid and alkali and washed, and automatically commence flowing again after the washing.

Other Uses of Exchange Resins

In the fine chemical and pharmaceutical industries ion-exchange resins have a wide potential range of usefulness, among them the following:—

1. Purifying solutions. Examples are the removal of ash from sugar and glycerin solutions (the sugar and glycerin passing through the beds) and the removal of iron from lactic acid solutions.

2. Alkaloid recovery. Different attractive forces are involved with large organicions than with small inorganic ions, and cationic exchangers take up alkaloids in preference to inorganic ions, which may be present in the impure solution. The alkaloid is then released as the pure base by flushing with caustic alkali. Exchange resins can similarly be used for the extraction of vitamins and the purification of antibiotics, while a simultaneous determination of aneurin and nicotinamide methachloride has been reported.

3. By the use of an appropriate type of exchanger, amino acids may be separated and purified, and exchangers are also of value in preparing protein hydrolysates

4. Exchange resins have also been used to remove salt impurities from dye solutions. Advantage is taken in the proces of the fact that the dye molecules are too large to enter the molecular pores of the resin, and therefore pass' through the column, whereas the salt ions are retained. On the other hand, to take up acidic dye stuffs resins have been made with pore large enough for the dye molecules to enter by taking advantage of different affinitie for the resin, the dyes may be separated

5. As catalysts. Acidic and basic ion exchange resins may be used as hydroger or hydroxyl-ion catalysts: they sometime give a considerable increase in the speed of the reaction (though some reactions ar slower). The use of the substances as catalysts has the further advantage that charring is reduced, and fewer side-reaction take place, while it is sometimes possible to distil the product direct from the resin catalysts can be used for the reaction of normally acid-sensitive substances and may readily be removed.

6. Recently work has been done on ab sorbing non-ionic substances such as suga and glycerin with ion exchange resins b first forming a complex between the compounds and boric acid or borates.

7. A medical use for which there is nalternative is the removal of sodium ior in œdema. A mixture of ammonium an potassium resins has been found best; it itaken orally. The potassium in the resi replaces the potassium from the gastri contents, etc., which is tending to be removed, while the ammonium ion ensure that no excess acid is produced. A pharmaceutical preparation (Katonium) of exchange resins is made by Bayer Product Ltd., Africa House, Kingsway, Londor W.C.1 (C. & D., August 9 p. 203).

C.& D. REFRESHER COURSE for Pharmacists

Compiled by
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Assixed by
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and E. J. FITCHETT, Ph.C.

20.—CHEMISTRY OF THE HORMONES

"We carry within us the wonders we seek without us"—

SIR THOMAS BROWNE IN "RELIGIO MEDICI"

Adrenocorticotrophichormone

HE adrenocorticotrophic hormone ACTH is a protein extracted from he pituitaries of cattle, sheep and pigs by rdinary protein extraction and separation echnique. The glands of pigs give by far he highest yield. The protein has a moleular weight of approximately 23,000 and here is no hope for its synthesis. Hower it has been found that hydrolysis of ACTH produces relatively simple polyeptides with an activity equal to that of ACTH itself. It is quite possible that these olypeptides will be synthesised and relace ACTH supplies of which are insufficient to meet demands.

17 hydroxycorticosterone (compound F)

7 hydroxy-11-dehydrocorticosterone (compound E)

Cortisone and compound F are steroids having the characteristic ring system shown. Cortisone is extracted from the adrenal gland of the pig. This source

Desoxycholic acid

of supply, however, can never meet the demand since adequate dosage of one patient for one week may require cortisone extracted from half a ton of glands. Partial synthesis of cortisone is difficult due to the difficulty of introducing the oxygen atom in ring C and to the fact that few natural steroids which occur abundantly have this ring oxygenated. A synthesis, however, is now being worked on a manufacturing scale by Merck & Co. using desoxycholic acid, one of the bile acids, as the starting material. The -OH group in position 12 makes the introduction of an oxygen atom at 11 relatively simple. The synthesis however involves thirty stages and the overall yield is of the order of o.1 per cent. Syntex S.A. are now constructing a plant in the U.S.A. for the production of cortisone from a steroid occurring in Mexican yam tubers. It is claimed that eventually this plant will produce sufficient cortisone to meet American needs because (a) of a virtually unlimited supply of starting material, and (b) fewer stages are involved in the synthesis. Compound F is also extracted from adrenal glands and can be prepared from cortisone by reduction.

Other hormones closely related to cortisone and compound F occur in the adrenal

cortex but only those with the following characteristics have antirheumatic activity

(a) a double bond between C4 and C5.
(b) an OH group on C17 and C21.

(c) an OH group or exygen on C11.

(d) an oxygen on C3 and C20

Sex Hormones

Sex hormones may be classified as follows:—

ESTRONE. Estrogens (female ESTRIOL. hormones) (ESTRADIOL -Corpus luteal 1. Natural hormones hormones PROGESTERONE (hormones of pregnancy) -Androsterone -Androgens -DEHYDROISO-(male ANDROSTERONE hormones) Testosterone Estrogens ETHINYL ŒSTRADIOL Pregnancy 2. Hormone derivatives ETHISTERONE hormones

TESTOSTERONE

Synthetic hormones—Synthetic estrogens

TESTOSTEROL

HEXESTROL

DIENŒSTROL

-Androgens

METHYL

MEPRANE

-Benzestrol

STRUCTURE: The first two main classes—the natural hormones and the hormone derivatives are all steroids having the same ring system as cortisone, i.e.,

The actual structures are summarised in the table at the top of page 266. This group of compounds clearly shows that small differences in structure cause profound differences in physiological action. The sex of individuals, for example, depends in part upon three double bonds and a methyl group—that being the only dif-

ference between æstrone and androsterone Oestrone and œstriol may be extracte from horse urine and it is surprising bu nevertheless true that the urine of stallior is richer in æstrogens than that of pregnar mares. Oestradiol, the most potent of th sex hormones, may be prepared from æstrone by reduction. Ethinylæstradiol prepared by the action of acetylene, in a indirect manner, on œstradiol and is the most potent æstrogen when administere Progesterone may be extracted from sow ovaries or prepared by parti synthesis from stigmasterol (a compone: of the unsaponifiable matter of vegetab oils) or from cholesterol (present in anim fats). Ethisterone-which has a simil action to progesterone except that it active when taken orally, since it escap degradation in the digestive tract—is pr pared by the action of acetylene on d hydroisoandrosterone followed by oxid tion. Androsterone and dehydroisoandr sterone may both be isolated from urir and testosterone (the most potent and gen) is extracted from testicular tissue. A three may be synthesised from cholester Methyltestosterone is prepared quite simp from testosterone and has the advantage

being effective when taken orally.

The synthetic æstrogens are quite d ferent chemically from the natural homones since they are not steroids at a The following are the formulæ of a few them:—

$$CH_3$$

$$CH_2$$

$$CH_2$$

$$CH_2$$

$$CH_2$$

$$CH_3$$

$$CH_3$$

$$CH_3$$

vroxine

Thyroxine is the hormone secreted by thyroid gland and it may be extracted refrom. Since the thyroxine is stored in gland as thyroglobulin, this conjugation protein must first be hydrolysed—rium hydroxide solution being the reent commonly used. In 1926 Harington lated thyroxine by this method and swed the formula to be as follows:—

arington confirmed the structure by synusis. This synthesis was used until cently for the manufacture of thyroxine t a much shorter route has now been covered starting with *l* tyrosine, a naturhydrolyse the ester and further iodinated to *l*-thyroxine. (Harington's method produced *dl* thyroxine which was only resolved with difficulty and much loss of thyroxine.)

Antithyroid Compounds

Thiourea (H₂N-CS-NH₂) was the first compound to be used but is rarely employed now. The thiouracils are extensively used. Thiouracil itself is too toxic

and the methyl and propyl derivatives are the best of the thiouracils. 5-iodo thiouracil also gives promising results as an antithyroid.

phenylalanine ethyl ester

his compound is then reduced to the diaine and converted to the di-iodo combund by the method of Sandmeyer:— The most recently introduced drug of this type is 1-methyl - 2 - mercaptoimidazole —more potent than propyl thiouracil.

his compound is then subjected to hydrosis to remove the acetyl group and

Propyl thiouracil

	R	R'	R"	OH group positions	Double bond positions	Other groups
ŒSTRONE	absent	-CH	=O	3	1, 2: 3, 4: 5, 10	nil
Œstriol	absent	—СН"	-ОН	3, 16, 17	1, 2: 3, 4: 5, 10	nil
Œstradiol	absent	-CH ₃	ОН	3, 17	1, 2: 3, 4: 5, 10	nil
Progesterone	$-CH_3$	-CH ₂	-CO-CH,	nil	4, 5	=O posn. 3
Androsterone	—CH ₃	—CH ₃	=O	3	none	none
DEHYDROISO-			-1			
ANDROSTERONE	-CH ₃	-CH ₃	=0	3	5, 6	none
TESTOSTERONE	-CH ₃	-CH ₃	-OH	17 .	4, 5	=O posn. 3
ETHINYLŒSTRADIOL	absent	—CH ₂	-ОН	3, 17	1, 2: 3, 4: 5, 10	none
E)	CITY		-С≡СН			
ETHISTERONE	$-CH_3$	-CH,	-OH	17	4, 5	=O posn. 3
METHYLTESTOSTERONE	—СН ₃	—CH ₃	—С <u>≕</u> СН —ОН —СН	17	4, 5	=O posn. 3

REVISION QUESTIONS

- 1. (a) Why cannot we expect ACTH to be synthesised? (b) What compromises are likely?
- 2. (a) What are the difficulties in the synthesis of cortisone? (b) How are thes difficulties being overcome?

NEW PRODUCTS AND RESEARCH IN AMERICA

PHENYLBUTAZONE has been approved by the U.S. Food and Drug Administration for use by doctors. An arthritis-relieving drug, it is said to be as effective as corbisone and ACTH but less expensive Lederle Laboratories Division of the American Cyanamid Company have developed a new anti-epileptic drug which has been given the name Hibicon, and a preparation containing zirconium oxide for the treatment of poison ivy rash and similar conditions. Work under way in America includes investigation of a derivative of the erythroidine bean, found in South America, for the relief of muscular spasms of cerebral palsy. The drug is known as betaerythroidine. The development of a drug, to which the name Wyamine sulphate has been given, which will increase blood pressure safely in emergencies resulting from shock has been announced by the research laboratories of Wyeth Inc., Philadelphia.

Cortisone by Fermentation

A new fermentation process for the production of cortisone has been developed by the Upjohn Co., Kalamazoo, Michigan. A mould of the genus Rhizopus is used, and the starting materials include stigmasterol (from soya beans), and ergosterol, or diosgenin (from Mexican yams). The materials are converted into steroids with an oxygen atom in the eleven position. These steroids can then be converted to cortisone. The process can be adapted for the production of hydrocortisone (compound F) and corticosterone

(compound B). The American Chemical Society's Third National Medicinal Chem istry Symposium at the University of Vii ginia, Charlottesville, was held recently In an address to the symposium Dr. B. I Brodie of the American National Hear Institute, Bethesda, Maryland, said tha the study of factors which control th concentration of drugs in plasma woul help in ensuring the medicinal use of new substances which might otherwise be dis carded, and would eliminate decades of trial and error. The factors included th rate and degree of absorption of the dru from the gastro-intestinal tract, the exter to which it was localised in the tissu and the rate at which the body acte on it. Dr. S. E. Luria, University (Illinois, said that a harmless "bob-tailed virus, which is produced when the norm: process of virus development within cell is interrupted by acridines, coul developmer used to halt the process during later stages. Dr. H. (Albaum, Brooklyn College, New York, obtaining an adenylic acid from yea which has been used by brewers. The acid has been found effective in relievir itch associated with Hodgkin's disease an in the treatment of bursitis, a painful di ease involving tendons.

More Polypharmacy? — Select you medicines with discrimination and discrition—mix your medicines with brains, an you will get results that cannot be obtained by any other means.—A speaker reported in the "Veterinary Record."

TRADE REPORT

pot quotations for pharmaceutical chemicals represent the prices for wholesale quanties of standard quality. Prices of crude drugs and essential oils vary as to brand or grade.

LONDON, AUGUST 20 Na week during which the markets coninued quiet a number of price changes, hiefly in a downwards direction, were otified. Among the chief of them was a eduction in the price of BISMUTH salts—change constituting the only notable novement which occurred in Pharmaceuti-

AL CHEMICALS.

Movements in the Crude Drugs section vere contrary to the general market trend. EEEGA rose to 13s. 3d. per lb., c.i.f. A air demand for that commodity was re-orted but supplies in London were very mall. Turmeric, Balsam of Peru, and DASCARA (at 225s. c.i.f., per cwt. for the ew crop) also showed increases in price. The position concerning Tinnevelly SENNA vas thought not to be so bad as was at first eared, and some offers from source had een made but the prices were not conirmed. There was no business in the drug. A little more activity was reported in MENTHOL which held its price at about 17s. 6d., duty paid. The Chinese product continued to be scarce. The ERGOT market was again unsettled, with a margin reported in London between buyers at about 12s, and sellers about 13s, per lb. Quotations in Portugal ranged up to about 14s 3d off INFEACLANA was stagnant. 14s. 3d. c.i.f. IPECACUANHA was stagnant with the Columbian variety easing to about 37s. 6d. per lb.; c.i.f.
In the ESSENTIAL OILS market PEPPER-

MINT was in better demand and the prices were maintained because of lack of the Chinese product. Ceylon CINNAMON leaf lropped in price by 3d. per lb. Ceylon CITRONELLA by 2d., and LEMONGRASS spot supplies by about the same amount. Orange was a little firmer at 17s. to 18s. per lb., and Geranium also firmed. Spanish Spike Lavender was up by 9d. to

1s, per lb.

U.S. Drug and Chemical Report

NEW. YORK, AUGUST 19 SALES of CHEMICALS continue good, Loss of materials through strikes is still affecting the GLYCEBIN market, however, and offer-ings were limited with values firm. One manufacturer announced a 40 per cent. reduction in the price of CORTISONE following the opening of a new plant for manufacturing the drug. Because of competition makers reduced Theophylline to \$4.40 per to \$4.30 per lb. (55 cents down).

Natural wild CHERRY BARK was higher at 18 cents per lb. (3 cents up). CAUSTIC

SODA remained generally firm despite isolated instances of trade concessions.

Movements in Essential Oils included reductions in distilled LIME to \$7.50 (50 cents down); natural Peppermint to \$6.65 (10 cents down) and redistilled PEPPER-MINT to \$7 (10 cents down).

Pharmaceutical Chemicals

Barbitone.—Rates per lb. are: 1-cwt. lots, 34s.; 28-lb., 35s. The Sodium derivative is 1s. per lb. more than the base.

BENZYL BENZOATE. — Makers' offers of B.P. grade range from 4s. per lb, for 1-ton lots to 6s. 9d. for smallest quantities.

BISMUTH SALTS,—Reduced from August 18. New prices (per lb.) in largest bulk packages are as follows :-

	ı -cwt.	28-lb.	7-lb.	
CARBONATE SALICYLATE SUBGALLATE SUBNITRATE	23 11	s. d. 27 7 24 2 23 3 23 11	s. d. 31 11 28 0 26 11 27 8	

2-cwt. lots are 3d. per lb. less than the 1-cwt. rates.

BUTOBARBITONE,—B.P.C. is 75s. per lb. in 1-cwt. lots.

CYCLOBARBITONE.—B.P.C. and CALCIUM DERIVATIVES in 1-cwt, lots are 75s, per lb.; small lots from 77s, 3d, to 79s, 6d, per lb.

DDT.—Prices are from 4s. to 4s. 3d. per lb., as to quantity.

DIAMORPHINE.—Alkaloid, 68s. 8d.; hydrochloride, 62s. 4d. ETHYLMORPHINE.—Alkaloid, 72s. 4d.; hydrochloride, 61s. 4d.

EMETINE SALTS .- Rates per oz. are as Today 136s, 6d.; 4-oz., 136s, ; 1-oz., 140s.

EPHEDRINE.—In 100-oz. lots ALKALOID is 12s. per oz.; Hydrochloride, 5s. 1d.;

SULPHATE, 8s. 6d.

GUAIACOLS.—Liquid and crystal are from 16s. 6d. to 17s. 6d.; and carbonate from 17s. 6d. to 18s. 6d. per lb.

HOMATROPINE HYDROBROMIDE. -- In 1-lb. lots price is 75s. per oz.; 4-oz., 80s., and

1-oz., 85s.

TODIDES.—Rates (per lb.) for POTASSIUM are as follows:—1-cwt., 18s. 1d.: 28-lb., 18s. 7d.: 7-lb., 22s. 2d. SODIUM IODIDE is: 1-cwt, 19s. 7d.: 28-lb., 20s. 1d.: 7-lb., 22s. 1d.: 7-lb. 23s. 10d.

IODINE PREPARATIONS.—Rates (per lb.) are as follows:—RESUBLIMED IODINE, 1-cwt., 21s. 3d.; 28-lb., 21s. 9d.; 7-lb., 25s. 9d. IODOFORM POWDER, 1-cwt., 25s. 4d.; 28-lb., 25s. 10d.; 7-lb., 30s. 6d. (CRYSTAL, 2s. 8d. per lb. more.)

ISOPRENALINE SULPHATE, - B.P.C. is 2s. 4d. per gm. for 100-gm. lots.

KAOLIN.—In 1-cwt, bags, LIGHT is quoted at 84s. per cwt.

Lactates.—Calcium, B.P., is 3s. 0½d. per lb. in 1-cwt. lots; 28-lb., 3s. 4½d.; 7-lb., 3s. 8½d. per lb. Calcium sodium, B.P.C., for the same quantities is 4s. 8½d., 5s. 0½d. and 5s. 4½d. per lb. Lactic acid, B.P., in 12 winchester lots is 4s. 3d., and 3 winchesters, 4s. 7d. per lb. Carboys are 4s. per lb.

MAGNESIUM HYDROXIDE, B.P.C.—Makers' price for 1-cwt. lots is 3s. 5d. per lb.

Magnesium oxide.—Rates for Light, B.P., are as follows:—1-ton lots, 4s, 5d.; 1-cwt., 4s, 8d.; 28-lb., in tins (free), 5s, 7d. per lb. In bulk packing, Heavy, B.P., is 5s. 4d. per lb.; in free tins, 6s. 6d. per lb.

Magnesium trisilicate.—In 28-lb. packages the prices (per lb.) are now as follows:—28-lb., 4s. 9½d.; 1-cwt., 3s. 10d.; 5-cwt., 3s. 8d. Lower quotations for larger quantities.

MANDELIC ACID, — 1-cwt, lots in 28-lb. containers are 10s. 9d, per lb. The CALCIUM SALT is also 10s. 9d., while SODIUM is 11s, 3d. per lb., for 1-cwt, lots.

PHOSPHORIC ACID.—B.P. is 1s. 5½d. per lb, in 1-2-carboy lots, Hypophosphorous, B.P.C., in winchesters, is from 5s. 9d. to 6s. 10½d. per lb., as to quantity.

POTASSIUM HYDROXIDE, — B.P. sticks

are from 6s. 6d. per lb.

Procaine hydrochloride, — 1-cwt, lots

are 32s. 6d. per lb.

Pyrogallic acid.—Pure Crystals are 18s, per lb. in 1-cwt, lots.

RESORCINOL. — Price per lb. for 28-lb. 56-lb. lots is 15s. 6d.; 1-10-cwt., 15s.

ROCHELLE SALT.—Rates (per cwt.) for powder or granulated material are as follows:—In 5-cwt. lots or over, 200s. per cwt.; 1-cwt., 202s. 6d. Seidlitz Powder, ordinary strength is 158s, 3d, per cwt. in 1-cwt. lots; smalls, from 1s, 11d. per lb. Extra-strong is 170s. 9d, per cwt., and 2s, for small quantities. Double-strength is 178s, per cwt.

Salol, B.P.C. — Current quotations for quantities of 1 cwt. are 9s. to 10s. 6d. per lb., according to pack; 28-lb., 10s. 6d.; 14-lb., 13s. 0½d.; 7-lb., 16s. 1d.

SILVER SALTS. — NITRATE in 1,000 oz. lots is 3s. 11 fd, per oz.; Protein unchanged at from 36s. 3d. to 42s. 9d. and for Vitellin from 68s. 6d. to 76s. 6d. per lb., as to quantity.

SODIUM CHLORIDE. — Re-crystallised is 20s, per cwt.

Sodium salicylate.—Rates are: 1-ton lots in bulk, 3s. 5d. per lb.; 5 - cwt., 3s. 5½d.; 1-cwt., 3s. 6d. Scheduled rates in the home market for 28-lb. and under 1-cwt. are from 4s. 1d. to 4s. 6d. per lb., as to pack.

SODIUM SULPHATE. — Maker's prices are from £10 10s, to £15 10s, per ton as to quantity for B.P. crystals.

Sodium thiosulphate, — Maker's price for 1-ton lots in paper - lined bags is £33 2s. 6d. per ton; 1-cwt. is £2 1s. 2d.

STILBESTROL. — Quotations are from 1s. 2d. per gm. to 1s. 7d., as to quantity

SULPHACETAMIDE.—Quotations (per lb. are from 24s. 6d, for 1-cwt, lots to 27s per lb. The SODIUM derivative is from 30s, to 32s. 6d.

Sulphanilamide. — Rates per lb, are 5-ewt. lots, 9s. 6d.; 1-ewt., 9s. 8d.; 56-lb. 9s. 11d.; 28-lb., $10s. 0\frac{1}{2}d$.

Tartaric acid. — Rates for the hom trade are as follows:—10-cwt. lots, 260s per cwt.; 5-9-cwt., 262s.; 2-4-cwt., 264s. 1-cwt., 265s.

TEREBENE. — For 1-carboy lots, 4s. 2d per lb. is asked. In winchesters, prices ar from 4s. $3\frac{1}{2}$ d. to 5s. 2d. per lb.

TERPINEOL.—Prices of B.P. grade ar from 4s. per lb. upwards as to quantity.

Terpin hydrate. — Prices are from 7s. 6d. to 8s. per lb., as to quantity.

Crude Drugs

Aconite. — Spanish napellus is 3s. 96 per lb., duty paid, ex wharf.

Agar.—Firm. Kobé No. 1 forward i 13s. 6d. per lb., c.i.f.

Aloes.—Prime Cape is about 157s, 60 per cwt., c.i.f., and spot, 180s, Curação i 360s, per cwt., spot.

Antimony, — English, 99.6 per cent £237 10s.; 99 per cent., £225 per ton.

ASAFŒTIDA.—Persian block is £18 pe cwt., duty paid.

Balsams.—Canada: Spot is now 27s. 66 per lb, for clear bright, paper - filtered forward, 25s. 6d, per lb., c.i.f.; promp shipment. Copaiba: Para is offered o the spot at 13s. 6d, per lb., duty paid Peru is 14s. per lb., duty paid, and 12s. 9c c.i.f. Tolu (genuine as imported) on the spot is 26s. 6d. per lb., in original cases and for shipment, 23s. 6d. c.i.f.

BISMUTH. — In minimum 5-cwt, lot METAL is 21s, per lb.

Buchu.—New-crop rounds are offered a 2s. 2d. per lb., on the spot.

CAMPHOR. — Chinese (B.P.) powder of the spot is 3s, 9d, per lb., in bond; \(\frac{1}{2}\)-ottablets are quoted at 5s, 10\(\frac{1}{2}\)d, per lb., dut paid; 2\(\frac{1}{2}\)-lb. slabs, 4s, 9d, per lb., dut paid.

Capsicums.—East African on stalk, ar from 130s, to 146s, per cwt., spot, an 110s., c.i.f.; off stalk are 200s., spot.

CARDAMOMS.—Aleppy greens (new-crop for October shipment are 14s. 9d, per lb c.i.f., and spot, 16s. 6d. Aleppy seeds ar about 26s., spot, and 21s. 6d., c.i.f.

Cascara sagrada.—American bark, 195 peel, is 280s. per cwt., duty paid. Nev crop, 225s., c.i.f.

CASSIA BARK. — Whole on the spot is 15s. per cwt., in bond; forward, 96s.,

CHERRY BARK. — Thin cut natural is rom 1s, 10d. to 2s. 2d. per lb., duty paid, s to holder. Rossed is 2s. 6d. per lb., on he spot.

CHILLIES.—Quiet. Sierra Leone on the pot are 200s, per cwt.; for shipment, 60s., c.i.f.; Mombasa, 240s. ex warehouse;

or shipment, 210s., c.i.f.

Cinchona. — Parcels of British East African chips testing 6.28 are offered at ls. 6d. per lb., and Portuguese West Afri-an broken quills testing 7.26 at 1s. 9d. er lb.

COCHINEAL.—Black is from 7s. 3d. to 7s. 9d. per lb., as to quality, and silver grey, 6s. 3d. to 7s., spot.

Colchicum. — Corms on spot are offering at from 2s. 3d. to 3s. 6d. per lb.; seeds: forward offers at 6s. per lb., duty paid.

Colocynth.—Pulp on the spot is 1s. 9d.

per lb., 'duty paid.

Ergot. — Portuguese new-crop offers range from 13s. 6d. per lb., c.i.f., London, to 14s. 3d., c.i.f. in Portugal.

Gamboge.—Good average Siam pipe is £45 per cwt., spot.

Gentian. — French natural on spot is 115s. per cwt., and 112s., c.i.f.

Gum acacia. — Kordofan cleaned sorts on the spot are 100s, per cwt.; August-September shipment, 93s., c.i.f.

Henna.—Indian green leaves are about 77s. 6d. per cwt., on the spot. August shipment of Sudanese, 110s., c.i.f.

Honey.—Spot supplies of Australian are from 105s, to 115s, per cwt., as to quantity, and Jamaican, 130s, per cwt. Argentine material is from 120s, to 125s, per cwt.

IPECACUANHA.—Forward offers of Nicaraguan. July-August shipment, are from 45s. to 46s. per lb., c.i.f., and Colombian, 37s. 6d., c.i.f. Spot quotations are: Nicaraguan, 48s., and Colombian, 44s.

MENTHOL. — Firmer. Chinese, 57s. 6d. per lb., duty paid. Brazilian, 45s. 6d., duty paid, scarce.

Orange Peel.—Thin machine-cut bitter quarters are 2s. 2d. per lb., duty paid.

Quassia.—Chips are available on the spot at 35s. per cwt.; forward offers are somewhat firmer at 32s. 6d., c.i.f.

Quillaia. — Forward rates for whole bark are £95 per ton, c.i.f.

Saffron. — Mancha superior is offered at about 175s, per lb, on the spot for small

Sandarac. — Morocco is offering on the spot at 18s. per lb.

Sarsaparilla. — Unchanged. Jamaican native red is about 2s. 6d. per lb., on the spot.

SEEDS.—Anise.—Turkish offering 132s, 6d, in bond and 147s, 6d., duty paid. Cyprus, 150s, CARAWAY.—Dutch quoted 92s, 6d., duty paid and 73s., f.o.b. Holland. CELERY.—Indian quiet, sellers offering at 1s. 10d. per lb. CORIANDER.—Spot. New crop Morocco is now arriving and is offered at 55s., duty paid. Old crop is 52s. 6d., duty paid and 50s., in bond. Shipment, no business reported. 41s. 6d. to 42s. 6d., c.i.f. quoted. CUMIN.—Spot, market dull. Cyprus, 185s.: Morocco, 195s., duty paid and 180s., in bond; Indian is 190s. The shipment remains firm with Morocco quoted at 185s., c.i.f. DILL.—Indian on spot is quoted at 80s. FENNEL.—Spot, Indian, 195s.; French, 185s., duty paid and 167s, 6d., in bond. Fenugreek.—Firm. Morocco 47s, 6d., duty paid spot London or Liverpool. Mustarp.—English 80s. to 105s., according to quality.

SENEGA.—Firm at source. Spot supplies are 12s. 6d. to 13s. 6d. per lb.; c.i.f. 13, 3d,

per lb.

SHELLAC. — Spot quotations are:— F.O.T.N., pure, 190s.; F.O. standard No. 1, 210s.; fine orange, 230s. to 285s. per cwt., ex-London warehouse.

SQUILL. — Italian white new-crop is offered from origin at 57s. 6d. per cwt., c.i.f. London. Spot is from 60s, per cwt.

Turmeric,—Firmer, Madras finger on the spot is 62s. 6d. to 65s, per cwt. Forward offers higher.

Waxes. — Bees'. — Dar-es-Salaam spot WARES.— DEES.— Dar-es-Sahaam spot 430s, per cwt., scarce; shipment, August-September, 375s., c.i.f. Benguela on the spot is 400s. per cwt., in bond; shipment, 365s., c.i.f. CANDELILLA.—Spot supplies are offered at 640s. per cwt.: no shipment offers. CARNAUBA. — Prime yellow. spot, 1,220s. per cwt.; afloat, 1,170s., c.i.f.; and 1,220s, per cwt.; anoat, 1,70s., c.1.f., and for shipment, 1,150s., c.1.f., per cwt. Fatty grey, spot 900s. per cwt. and 860s., c.i.f. for shipment, Montan.—Reibeck crude on the spot is 135s. per cwt. Ouricuri.—Spot 0.5 per cent. impurities, 700s. per

WITCH HAZEL.—Leaves on the spot are

quoted at 2s. per lb.

Essential and Expressed Oils

Bergamot. - Nominal spot value is from 100s. to 105s. per lb.

BIRCH TAR.—Rectified is from 10s. to 12s. 6d. per lb., on the spot.

Cade. — Supplies of Spanish are from 2s. per lb., ex warehouse, London.

Cananga,-Supplies to come forward are quoted at from 60s. per lb., c.i.f. Java is available on the spot at 70s, per lb.

CARAWAY.—Quiet. English-distilled is offered at 45s.; imported oils are from 30s. per lb., for spot.

CARDAMOM. — English-distilled is from 425s. per lb. for spot material, and imported, 400s. per lb.

CINNAMON.—B.P. oil on the spot is quoted at from 65s. to 70s. per lb. English bark oil is offered at 22s. 6d. per oz., Ceylon leaf, 9s. 9d. per lb., spot, for 5-cwt. lots

CITRONELLA. — Spot prices for original drums are: Ceylon, 3s. 9d. per lb., 3s. 3d. shipment; Formosa, 4s., in bond; Java, 4s., 9d., in bond. Forward: Ceylon, 3s. 7d.; Formosa, 8s. 6d., and Java, 4s. 4d., all c.i.f., August shipment.

Cod-Liver.—Medicinal, B.P., is 11s. 6d. per gall, in charged returnable drums to retailers. Veterinary is from 11s. 4d. per gall.

EUCALYPTUS.—Drum lots of 70 to 75 per cent. eucalyptol on the spot are 7s. per lb., and 80 to 85 per cent. 7s. 3d.

GERANIUM. — Dearer, Bourbon on the spot is 90s, to 95s, per lb, in lots of 5 cwt.

LAVANDIN.—Quotations for spot supplies are about 17s, 6d, per lb.

are about 118, ou, per it

LAVENDER.—French, 40-42 per cent, linalol on the spot is from 43s, 6d, per lb. Spanish Spike is dearer at 12s, to 13s, 3d, per lb.

LEMON. — Sicilian hand-pressed (4 per cent. citral) is quoted at from 40s, to 46s, per lb., c.i.f.; spot is from 40s, to 50s., according to quantity and holder.

Lemongrass. — Forward quotations are 7s. 3d. per lb., c.i.f. Spot supplies are offered at 8s. 6d. per lb.

LIME.—Limited supplies of West Indian distilled are about 65s. per lb., on the spot.

NUTMEG.—English-distilled oil is about 38s, per lb. Imported oil (B.P.) is offered at 30s, per lb., duty paid for drum lots.

OLIVE.— Pharmaceutical oil in 45-gall, drums, spot, is from 24s, 6d, to 25s, per gall. French virgin oil is offered for shipment at £240, and French pharmaceutical (maximum acidity 0.25 per cent.), at £230 per 1,000 kilos, c.i.f. U.K. ports, Spanish is £220 10s, per 1,000 kilos, f.o.b., main Spanish ports.

ORANGE.—Firmer. Spot offers range from

17s. to 18s. per lb.
ORIGANUM.—In original containers the

price is 14s. per lb.

Otto of rose. — Turkish is from 400s.

Otto of Rose. — Turkish is from 400s, per oz., and Bulgarian, 450s., nominal, spot.

Palmarosa, — Spot quotations for Formosan are 37s, 6d, per lb, East Indian is 52s, 6d., c.i.f.

PATCHOULI. — Spot supplies of Penang are offered at 58s, per lb., and forward 52s, 6d., c.i.f.

PEPPERMINT,—Firm, Chinese arvensis oil on the spot is from 37s. 6d. per lb. Japanese, 35s. 6d.; Brazilian, 17s. per lb. in drums, shipment, 16s.; Italian "Mitcham" type, 55s. to 57s. 6d. according to quality.

WORLD TRADE

Japanese Sulphur Exports. — The Japanese Ministry of International Trace and Industry has announced that licency will be issued for a total of 41,735 to of sulphur exports during the second has of 1952.

Pakistan Open Licence.—The Pakista Government has issued a new open ge eral licence, OGL No. 14 which supe sedes OGL No. 13. The list of goo covered by the new licence includes: Ch micals; drugs and medicines; dyes at dyeing and tanning substances; glabottles and phials, acid containers mad of glass; laboratory glassware; hypode mic and other surgical needles; x-ray film milk food for infants; and cork manufatures.

Germany Extends Import Liberalis tion.—A new extended West German fr import list for imports from countries b longing to the European Payments Unit was published in the Official Gazette August 12. The new list became effection that date. Items which have be added to the free list include: Boric aci zinc oxide, antimony oxide, fluoride phosphates, cyanides, other salts and i organic acids, liquid air, peroxides an other chemicals, tanning substances, sor cosmetic articles, photographic plates.

Brazilian Pharmaceutical Develoments.—Charles Pfizer & Co. have fou ded a subsidiary in Brazil, Pfizer International S.A. The company will specifise in antibiotics.—The following production may only be imported into Brazil in future from countries of non-convertible currecies: Natural or synthetic camphor; detal anæsthetics; coloidal kaolin for meccinal purposes; acetylsalicylic acid.—T legal formula for winding up Quimi Bayer Limitada in Brazil, as suggested the Brazilian Attorney General for the R public, has been officially approved.

Multiple Exchange Rates for Ind nesia. — On August 12, three exchan rates for imports in Indonesia becar operative. Foreign exchange is no long available for certain luxury goods. Ca gories into which imports have been divid are as follows: (1) Essential goods whi will continue to be imported at the rate 31.92 rupiahs to the £; (2) non-essent but useful goods: Rate, 63.84 rupiahs the £; (3) luxury goods for which forei exchange is available: Rate, 95.76 rupia to the £; (4) luxury goods for whi foreign exchange will not be available.

IISCELLANEOUS INQUIRIES

rup of Desessartz.—G. W.—This is, in full, pectoral de Desessartz, a synonym for sirop écacuanha composé, French Codex.

ristol Powder.—B. B.—The formula for Bristol der is:—

odium nitroprusside 0.5 odium phosphate tribasic (anhydrous) 12.5 mmonium sulphate 87.0

ub-lingual Medication.—M. S.—The generally pted view as to the considerations on which tablet should be made is that a very hard let is called for so that its effect is not disted by having its active ingredient quickly ied away in the salival secretions.

rotecting Charcoal Drawings.—J. M. W. L.—A able preparation for protecting charcoal drawings inst the danger of smudging is a 24 per cent, tion of collodion in stearin. If the collodion to thick it may be thinned with ether before proparating the stearin. The product is applied pouring it over the drawing in the same way developer is poured over a photographic plate.

leaning Paint Kettles.—B. P. S.—Paint kettles uld, if possible, be cleaned before the paint had time to harden. For the undried paint useful solvent is solvent naphtha. For dried nt methylene chloride, or a mixture of solvent and that (three parts), kerosene (one part) and bhol (one part) is preferable. Alternatively a 5 per cent, solution of caustic soda may be d provided that suitable precautions (rubber ves, etc.) are taken by the user.

otton Wool Bleaching.—S. V. L.—The bleachof cotton wool is done in different ways by
erent manufacturers. In essence the process
simple. The cotton wool is first treated with
warm solution of caustic soda to remove fat
1 other similar unwanted substances. After
shing it is treated with bleaching powder and
ter, and washed in plain water. If necessary
bleaching process is repeated more than once
til the desired whiteness is obtained. After
last washing the cotton wool is "soured"
h dilute sulphuric acid and given a final washIn practice, "Know-how" is needed.

Bronzing Brass Articles.—G. A. I.—A bronze pearance may be given to brass articles by imrising them for thirty seconds in:—

Potassium permanganate 10

		sulphat						
Hy	droch	loric ac	id					5
Di	stilled	water					to 1	,000
		allow						
e	article	es beco	me	too	dark.	or i	f a r	eddish
		desired,						
lowing solution at 140°F:—								
		acid						10

omonic acid	• • •	• • • •	• • • •	10
Hydrochloric acid				10
Potassium permanganate		•••	***	10
Ferrous sulphate		• • • •	•••	50
Distilled water	• • •		to 1,	
noo and don 1 f 1		. 1		

nse and dry as before. If the second solution used by itself, a dark yellow or reddish-brown lour is produced. The tone of the colours is proved by heating in a drying oven.

NEW GERMAN PROPRIETARIES

The following information from German pharmaceutical periodicals gives details of recently introduced proprietary specialities.

SANGAMIN (blood protein hydrolysate) for oral amino-acid therapy, Made by Joh, A. Benckiser GmbH., Ludwigshafen (Dtsch Apothekerztg, February 29).

NEDOLON.—Tablets of dionin 0.005 gm.; ephetonin, 0.005 gm.; dimethylaminophenazone, 0.15 gm. Made by E. Merck, Chemische Fabrik, Darmstadt (Disch Apothekerztg, January 25).

HEPARAXAL (a taraxacum extract for intravenous injection in liver disorders, jaundice, cholecystitis). Dosage: One (1 mil) ampoule daily; on improvement, one every two days. Issued in boxes of 10 ampoules by Bika Chem.-Pharm, Fabrik., Stuttgart 13, Talstrasse 47 (Dtsch Apothekerztg, February 2).

GLUTISAL (salicylamide dimethylamino-phenyldimethyl-pyrazolone 0.5 gm. in each tablet, with a salicylamide content of 80 per cent.), for polyarthritis, arthrosis, arthritis, neuralgias. Issued in packs of 20, 50, 100 and 500 tablets, by Ravensberg Chemie GmbH., Löhne/Westphalia (Dtsch Apothekerztg, February 29).

TALEUDRON (2-(N-phthaloylsulphanilamido) thiazol).—Indicated for preparation of patients for gastro-intestinal operations, treatment of colitis ulcerosa, bacillary diarrhoea and acute enteritiss. Dosage: 6-8 tablets daily, Issued in tubes of 10 and 20 0.5 gm. tablets by Bayer, Leverkusen (Dtsch Apothekerztg, January 25).

Lysolin (emulsion of high molecular, alkylised, arylised and aralkylised, partly chlorinated phenols), an odourless disinfectant used in 1 per cent solution. Issued in packs of 100, 250, 500 and 1,000 gm., and larger ones (up to 200 kilos for large consumers) by Schülke & Mayer A.G., Hamburg 39 (Disch Apothekerztg, February 29).

HEPAFANGIN.—Preparation of Carduus marianus (milk thistle) for liver prophylaxis. Indicated in epidemic and hæmatogenous infections hepatitis and other conditions affecting the liver. Dosage: 5 to 10 drops three times daily. Issued in 20, 250 and 1,000 mil packs by Dr. Willmar Schwabe, GmbH., Carlsruhe (Disch Apothekerztg, January 25).

Alexan (highly active sterile solution of thrombin), local harmostypic. The makers (Heinrich Mack Nacf., Illertissen Bay) state that best results are obtained with swab or spray (in tonsillectomy). One application of less than 3 mils usually suffices. Issued in packs of 3 ampoules of 3 or 9 mils (Pharm. Ztg.-Nachrichten, January 15).

THYREOGUTT.—Pure vegetable thyreotropic active substance in alcoholic solution with antithyroid and sedative actions indicated in hyperthyroidism, Basedow's disease (slight cases) and vegetative dystonia in doses of 5-8 drops thrice daily. Issued in packs of 10, 250 and 1,000 mils by Dr. Willmar Schwabe, GmbH., Carlsruhe (Dtsch Apotheherztg, January 25).

TRADE MARKS

From the "Trade Marks Journal," August 6

For organic sterilising preparations (5)

LACTOSAN, 707,161, by Gascoigne-Crowther, Ltd., London, W.C.1.

For medicated preparations for the treatment of the eyes (5)

OPTOLAIN, 708,370, by the Phenolaine Co., Tunbridge Wells, Kent,

For scissors, razors, razor blades and beard and hair clippers (8)
CUTA-VAIVE, 707,067, by Hair Culture Co.,

Ltd., Beckenham.

For surgical, medical, dental and veterinary instruments and apparatus (10)

TELEFLEX, 590,484, by Teleflex Products, Ltd., London, W.1.

For pharmaceutical preparations (5)

TOPOSIN, 703,305, by Eli Lilly & Co., Indiana, U.S.A. UMBRALON, 705,757, by Farbenfabriken, Bayer, Leverkusen, Germany. IRRIDERM, 706,198, by Stanley Z. Jackson (Chemists), Ltd., Castleford, Yorks. PNEUMO-CILLINE, 707,146, by Les Laboratoires Francis de Chemiotherapie, S.A., Paris, France. DIGIPURPID, 707,934, by Sandoz A.G., Basle, Switzerland. FERMANDREN, PROTANDREN, 707,944-45, by Ciba, Ltd., Basle, LIONS LEAP, LOWENSPRUNG, 708,081-84, by Rudolf Goretzki, Braunschweig, Germany. APPEDRETS, 708,231, by George Panton, Ltd., London, W.11.

From the "Trade Marks Journal," August 13

For calcium products used in industry, agriculture and horticulture (1) and for all goods (3).

KERMATEX, 703,272-74, by Kermatex, Ltd., Padiham, Lancs.

For industrial chemicals (1).

LEREXAL, 707,371, by Farbenfabriken Bayer, Leverkusen, Germany.

For agricultural chemicals (1),

HALBEX 707,877, by Shell Chemicals, Ltd., London, E.C.4.

For detergents (3).

CLENNA, 708,161, by Enna, Ltd., Greenford.

For preparations for cleaning the teeth (3). DENTAROM, 708,177, by Paul V. Kutiak &

Co., Ltd. London, S.W.14.

For infants' and invalids' foods (5).

Device of wine glass, 704,626, by Pigeon House Farm Products, Ltd., Selsey.

For antibiotics (5).

DIMYCIN, 705,616, by Glaxo Laboratories, Ltd., Greenford.

For pharmaceutical preparations (5).

PSOREX, ACNIL, B706,774-707,991, by Genatosan, Ltd., Ipswich, MEMINE, 708,314, by J. F. Macfarlan & Co., Ltd., Boreham Wood, PABO-VITE, 708,438, by Paines & Byrne, Ltd., Greenford.

For laxatives being pharmaceutical preparations (5). NYLAX, 706,974, by British Chemotheutic Products, Ltd., Bradford.

PRINT AND PUBLICITY

Proprietaries Price List.—Northern Pharmaceu cals, Ltd., Galen House, Bradford, Yorks, ha issued their 1952A price list of proprietaries.

Showcard with Container.—A showcard bearia a sales slogan with a hand holding what appelike an actual jar (in reality a cleverly imitat half-jar) of Brand's essence of chicken, has be produced by Brand & Co., Ltd., Mayfair Wor London, S.W.8.

Press Campaigns.—National Press advertising of Meggeson bismuth dyspepsia tablets on a scenever before attempted by Meggeson & Co., LT Llewellyn Street, London, S.E.16, will commer in September.—Tokalon, Ltd., 24 Gilbert Stre Mayfair, London, W.1, are planning large-so Press advertising for their range of products which important improvements are being made

Medical Leaflets.—Leaflets, folders and bookl are obtainable from manufacturers as list below:—

Boots Pure Drug Co., Ltd., Station Str-Nottingham: "Rayso brand Micro-fine Bari Sulphate"; "Cachets of Sodium Para-amit salicylate."

Cow & Gate, Ltd., Guildford, Surrey: 'Handbook for the Medical Profession'' (57 edition of thumb-indexed 52-p. booklet contain data on the various Cow & Gate foods).

ELI LILLY & Co., Ltd., Basingstoke, Han "Research Today," No. 2, 1952 (28-p. magazi containing a review article on "The Multipli tion of Viruses"; "Duracillin Ophthalmic Oi ment and Troches" (data card).

Menley & James, Ltd., Coldharbour La London, S.E.5: "Eskacillin" (6-p. folder).

RIKER LABORATORIES, LTD., Kirkewhite Stre Nottingham: "Veriloid" (21-p. booket); "Ve loid Intravenous Solution" (4-p. leaflet).

ROUSSEL LABORATORIES, LTD., 847 HARROW RO London, N.W.10: "Angioxyl Syrup" (4 leaflet).

Answers to Revision Questions

- 1. (a) It is a highly complex prote with a molecular weight of approximate 23,000. (b) The hydrolysis of ACTH pi duces equally active polypeptides whi may be synthesised.
- 2. (a) (i) The difficulty of introduci the oxygen atom in ring C of the stero nucleus, (ii) Few steroids occurring naturally in satisfactory quantities have this rioxygenated, (b) (i) A synthesis has be devised with a starting point of desory cholic acid (a bile acid). The process lengthy and the yield small, (ii) Cortiso is being produced from a steroid occurring in Mexican yam tubers. There is am a raw material and the process is relative simple.



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